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SOILS OF THE COBEQUID SHORE AREA OF NOVA SCOTIA

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Report No. 23
Nova Scotia Soil Survey

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OF NOVA SCOTIA

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K.T. Webb
Land Resource Research Centre
Truro, Nova Scotia

J.P. Duff
MacLaren Plansearch Limited
Halifax, Nova Scotia

D.R. Langille
Land Resource Research Centre
Truro, Nova Scotia

Land Resource Research Centre
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CONTENTS

ACKNOWLEDGMENTS.....	vi
PREFACE.....	vii
PART 1. GENERAL DESCRIPTION OF THE AREA.....	1
Location and extent.....	1
Physiography and geology.....	1
Climate.....	5
Vegetation and land use.....	11
PART 2. SURVEY METHODS.....	13
Mapping methods.....	13
Sampling and laboratory methods.....	14
Cartographic methods.....	15
Data analysis and storage.....	15
Map unit naming conventions.....	15
PART 3. SOIL AND MAP UNIT DESCRIPTIONS.....	23
Acadia soils (ACA).....	23
Bridgeville soils (BGE).....	25
Canaan soil group (CAA23, CAA52).....	26
Cumberland soils (CBR).....	28
Chaswood soils (CHW).....	29
Comeau soil group (CMU23, CMU53).....	30
Cornwallis 85 soils (CNW85).....	32
Castley 8P soils (CSY8P).....	33
Cherryfield soils (CYF).....	34
Dufferin soil group (DFN5P, DFN8P).....	35
Debert soil group (DRT22, DRT52, DRT82).....	36
Economy soil group (ECY23, ECY53, ECY83).....	40
Fash 80 soils (FSH80).....	42
Falmouth 52 soils (FUH52).....	43
Glenholme 52 soils (GNH52).....	44
Grand Pre soils (GPR).....	46
Hebert soil group (HBT23, HBT53).....	47
Hansford soil group (HFD23, HFD52, HFD53, HFD83).....	49
Hantsport soil group (HTP22, HTP23, HTP52, HTP53).....	53
Kingsville soil group (KSV20, KSV22, KSV52).....	56
Lawrencetown 80 soils (LWR80).....	59
Metaghan 53 soils (MGA53).....	60
Mahone soil group (MHO22, MHO52, MHO53).....	61
Masstown soil group (MSW22, MSW52, MSW82).....	64
Onslow 52 soils (OSW52).....	66
Pugwash soil group (PGW22, PGW52, PGW82).....	67
Queens soil group (QUE20, QUE22, QUE52).....	70

Rossignol 8P soils (RG08P).....	74
Springhill soil group (SGL23, SGL52, SGL53, SGL83).....	75
South Alton soil group (SHN23, SHN53).....	78
Stewiacke soils (STW).....	80
Truro soil group (TU052, TUOX2).....	81
Vernon Mines soil group (VRN23, VRN52, VRN53).....	83
Woodbourne soil group (WOB22, WOB52, WOB53).....	84
Land types (Zxx).....	86
 PART 4. SOIL INTERPRETATIONS FOR AGRICULTURE.....	 88
CLI capability classification for agriculture.....	89
Soil suitability for selected crops.....	105
Ratings.....	112
 REFERENCES.....	 125
 APPENDIX.....	 127

FIGURES

1. Location of map sheets.....	2
2. Physiographic regions.....	3
3. Generalized geological formations.....	4
4. Climatic regions and stations.....	7
5. Annual total precipitation.....	7
6. Annual total degree days above 5°C.....	7
7. Average frost free period.....	7
8. Forest vegetation zones.....	12
9. Sample soil symbol.....	15
10. Sample soil map unit symbol.....	16

TABLES

1. Monthly temperature and precipitation data for representative stations.....	8
2. Degree days above 5°C.....	9
3. Degree days above 10°C.....	9
4. Average and extreme dates of frost and length of frost free period at representative stations.....	10
5. Probability of frost occurrence at representative stations.....	10
6. Upper soil codes.....	16
7. Stoniness classes.....	17
8. Slope classes.....	17
9. Rockiness classes.....	17
10. Correlation of soil names with county soil surveys....	18
11. Soil key.....	20
12. Soil capability for agriculture key.....	93
13. Soil suitability for alfalfa.....	109
14. Soil suitability for apples.....	109
15. Soil suitability for spring cereals.....	110
16. Soil suitability for winter cereals.....	110
17. Soil suitability for corn.....	111
18. Soil suitability for forage.....	111
19. Soil suitability for vegetables.....	112
20. Soil attributes used for interpretations.....	113
21. Soil map unit interpretations.....	117

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PREFACE

This report and the accompanying maps cover approximately 107 000 ha of the Cobequid Shore Area of Nova Scotia. The survey areas is shown on map sheets 21A/16, 21H/1, and 11E/3, 4, 5, and 6 in the National Topographic Series. The aim of the report is to provide soils information at a semi-detailed level (1:20 000 scale) to aid the development of the agricultural land base.

Part 1 contains a general description of the survey area, including physiography, geology, climate, vegetation and land use. Part 2 contains survey, mapping, and laboratory methods. Soil materials, landform and profile characteristics of the soils are described in Part 3. Part 4 contains interpretations for agricultural capability and crop suitability for selected agricultural crops.

This publication is Report No. 23 of the Nova Scotia Soil Survey. It is one of a series of three soil surveys of significant agricultural areas of Nova Scotia. All three surveys were funded under the Canada/Nova Scotia Agri-Food Development Agreement.

The soil maps, legend and report each provide complementary information. To manually retrieve map information, the following steps are suggested:

1. Locate the area of interest on the soil map, using the key map if necessary.
2. Note the map unit symbols in the area of interest.
3. If soil attribute information is required, interpret the symbols using the legend and the sample symbol found on it. For more specific information on the soils, consult Part 3.
4. If soil interpretive information is required, find the map unit symbols in the appropriate tables in Part 4.

For maps in digital form or for raw analytical data, consult the Canada-Nova Scotia Soil Survey at the Nova Scotia Agricultural College in Truro or the Land Resource Research Centre in Ottawa.

PART 1. GENERAL DESCRIPTION OF THE AREA

Location and extent

The survey area is located in central Nova Scotia around Cobequid Bay and Minas Basin in Colchester and Hants Counties between latitude $45^{\circ} 28'$ and $45^{\circ} 57'$ north and longitude $63^{\circ} 15'$ and $64^{\circ} 15'$ west.

The area has about 150 km of coastline on Cobequid Bay and Minas Basin, the south arm of the Bay of Fundy.

The survey covers about 107 000 ha and is mapped on 46 full or partial map sheets (Fig. 1). Each full map sheet represents 3 000 ha.

Physiography and geology

The survey area is located on the Minas Lowlands physiographic region (Roland 1982). The lowlands extend east from the Annapolis Valley to the Pictou Basin and south from the Cobequid Upland to the Southern Upland (Fig. 2). They rise gradually in elevation from sea level along Cobequid Bay and Minas Basin to more than 225 m where they border the western edge of Pictou Basin. The Minas Lowlands are drained in the north by the Bass, Portapique, Great Village, Folly, Debert, and Chiganois rivers, in the south by the Avon, St. Croix, Kennetcook, Hebert, Cogmagun, Walton, Tennycape, Five Mile, Shubenacadie, and Stewiacke rivers, and in the east by the Salmon and North rivers. All of these rivers empty into the Bay of Fundy.

The degree of resistance to erosion of the underlying geological formations account for the range in elevation found on the lowlands. Surrounding Cobequid Bay from sea level to about 120 m, lies a band of Triassic sedimentary bedrock. A gently undulating till plain overlies the Triassic bedrock. The till is derived mainly from the soft Triassic rocks and is usually deep, coarse loamy, non to slightly stony, and has a wide range in permeability. Both glacial and recent fluvial processes have shaped the landscape of the Triassic portion of the lowlands. Deposits of sand and gravel, washed southwards from the Cobequid Upland, have been deposited as outwash plains and deltas along the reaches and at the mouths of many of the rivers that drain the northern portion of the Minas Lowlands. Tides in the Bay of Fundy have further modified the mouths of many of these rivers, forming marshlands composed of deep, fine silty, marine sediments. Many of these marshlands have been dyked to protect them from tidal flooding and are now used for agriculture.

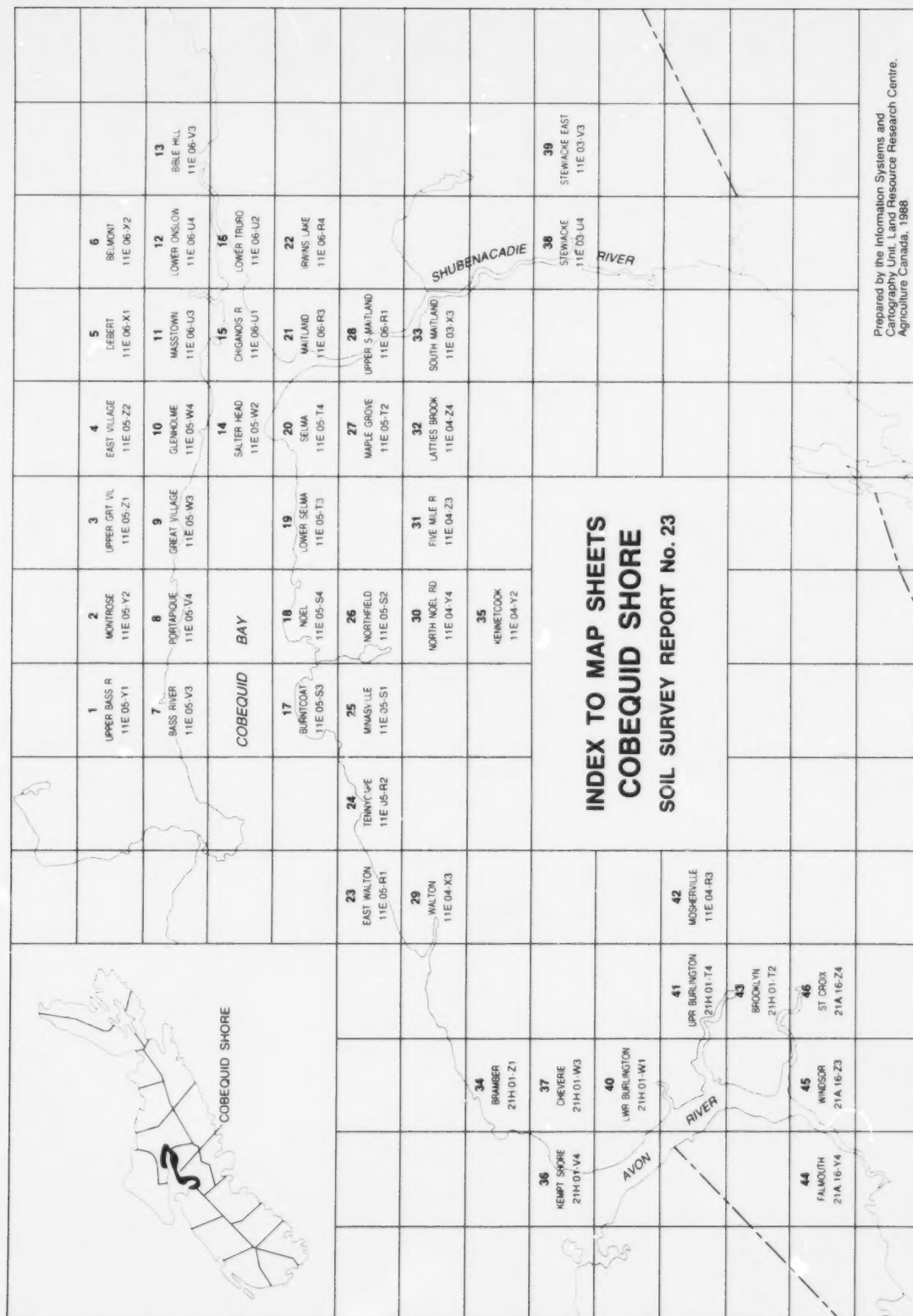


Figure 1. Location of map sheets

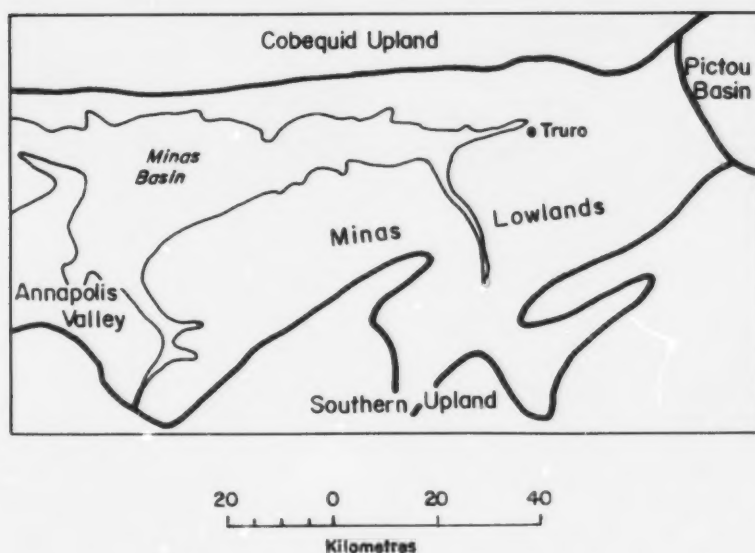
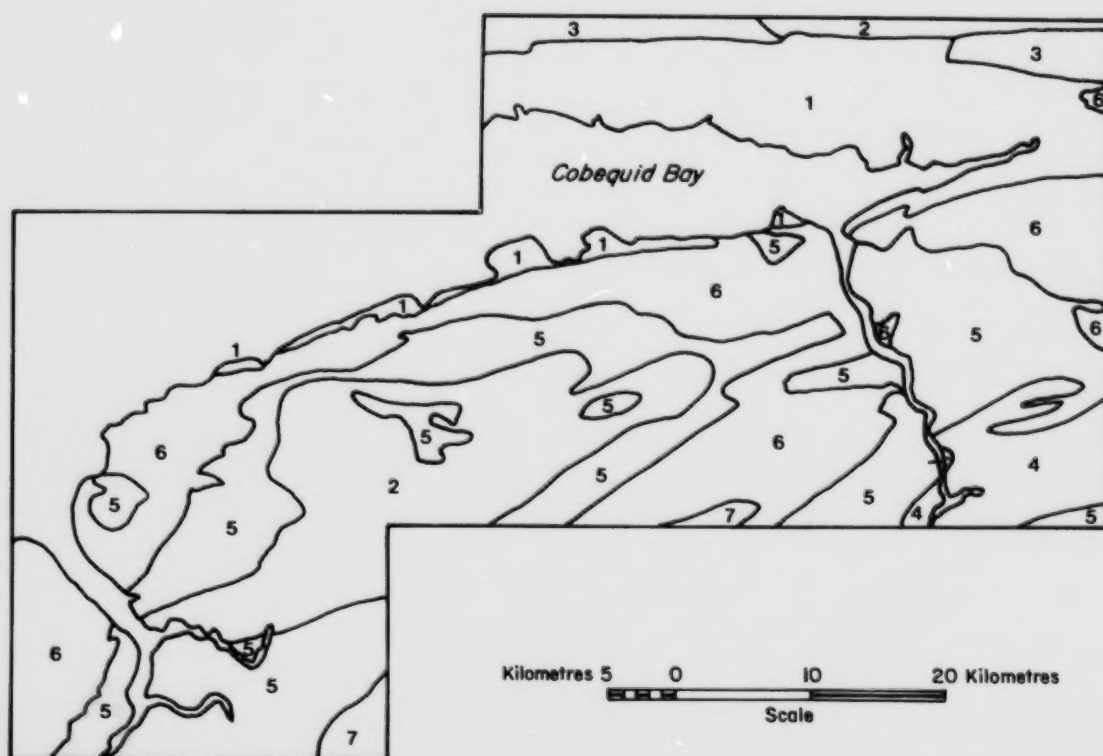


Fig. 2. Physiographic regions (Roland 1982).

Carboniferous bedrock underlies the remaining portion of the Minas Lowlands and completely borders the Triassic formations at its inland edge. The southern section of the lowlands has topography similar to the Triassic portion but is underlaid by Carboniferous bedrock of the Pictou, Windsor, and Horton groups (Fig. 3). The dominant landform in this part of the lowlands is a gently undulating to rolling till plain. The till deposits overlying and derived from the Pictou and Windsor groups are usually deep, coarse to fine loamy, slightly to moderately stony, and slowly permeable. Till deposits overlying the relatively hard bedrock of the Horton group are usually shallow, coarse loamy-gravelly to fine loamy-gravelly, slightly to moderately stony, and slowly permeable.

Associated with meandering rivers and streams are areas of alluvium, lacustrine sediments and peat deposits. Peat deposits are also associated with very poorly drained depressions or level areas on till plains.



LEGEND

Triassic

- 1 - Undivided Late Triassic. Siltstone, wacke, conglomerate

Late Carboniferous

- 2 - Pictou Group. Sandstone, shale, conglomerate
 3 - Riversdale Group. Arenite, siltstone, shale, conglomerate, mudstone

Early Carboniferous

- 4 - Watering Brook Formation. Shale, gypsum
 5 - Windsor Group. Sandstone, shale, limestone, gypsum
 6 - Horton Group. Sandstone, shale, siltstone, arkose

Cambrian

- 7 - Meguma Group. Slate, siltstone, greywacke

Fig. 3. Generalized geological formations (modified from Keppie 1979).

Climate

The survey area is located within a cool, humid, temperate climatic zone. This zone is influenced strongly by prevailing westerly winds that cause many of the low-pressure weather systems moving across North America to pass over Atlantic Canada. The frequent passage of bad weather associated with these low-pressure systems, and its maritime location, provide the survey area with ample precipitation.

The survey area experiences a modified continental climate, which displays great variability in all seasons. This variability is produced by the continual interaction of continental and maritime air masses. Because most of the weather systems originate in the interior, the continental influence often dominates the maritime influence. The continental influence on the region causes a wide range in annual temperature. As a result, the mean annual temperature in the survey area is double that of the Pacific coast. Continental influence is felt in the warm, high-pressure spell in summer and the cold, clear period in winter. Winters are cold with frequent snow falls and often kill forage and winter cereal crops. Springs are late, cool, and cloudy; summers are warm and quite humid.

The ocean, by supplying heat when it is cold and cooling when it is warm, moderates the climate which reduces the temperature range in coastal areas. Most coastal areas of Nova Scotia have milder winters, cooler summers, and longer frost-free periods than interior locations. However, the benefit of an extended growing season in these coastal areas is offset by cool summer temperatures and fewer growing degree days for plant growth (Dzikowski 1984).

The survey area extends over four climatic regions described by Dzikowski (1984) (Fig. 4).

Northern Nova Scotia. The Northern Nova Scotia climatic region is characterized by high snowfall. The region has warm summer temperatures and the coldest winter temperatures in the province. There are no climatic stations located in the survey area to represent the region.

Bay of Fundy. The Bay of Fundy climatic region has long, cool summers, mild winters, frequent fog, and moderate precipitation. Coastal areas take the brunt of the winds, which are commonly from the west and northwest in winter. Northwesterlies in spring are frequently responsible for delayed plant growth along the shore, and all year they are often twice as strong on the shore as at points inland.

The data from the Noel, Clifton, Truro, and Debert A weather stations are representative of this region. This is the dominant climatic region in the survey area.

Eastern Nova Scotia. The Eastern Nova Scotia climatic region has high rainfall and cool temperatures due to the influence of the cold Labrador current. The data from the Rawdon and Upper Stewiacke weather stations are representative of this region.

Annapolis Valley. The Annapolis Valley climatic region has the warmest temperatures and the second lowest precipitation in the province. The data from the Summerville, Salmon Hole, and Windsor/Falmouth weather stations are representative of this region.

Total annual precipitation over the survey area ranges from a low of 1074 mm at Summerville to a high of 1296 mm at Debert A (Table 1. and Fig. 5).

Average snowfall amounts range from 208 cm at Debert A to 265 cm at Rawdon. Mean July temperatures range from a low of 17.8°C at Truro to a high of 19.1°C at Windsor/Falmouth. Mean January temperatures range from a low of -6.8°C at Truro to a high of -4.9°C at Summerville.

An indication of the length of the growing season for most crops is given by the average number of growing degree days (GDD) above 5°C. Growing degree days are based on threshold temperatures below which plants do not grow. For perennial plants, a threshold temperature of 5°C is most valid, but for tender, heat loving plants, such as tomatoes and beans, a base temperature of 10°C is more appropriate (Dzikowski 1984). In the survey area, growing degree days above 5°C range from a low of 1582 at Truro to a high of 1843 at Windsor/Falmouth (Table 2). This range is comparable with the Prairies but is 7-900 GDD fewer than southern Ontario. Figure 6 illustrates the distribution of total annual growing degree days above 5°C. Growing degree days above 10°C ranges from a low of 768 at Truro to a high of 959 at Windsor/Falmouth (Table 3).

For practical purposes, the length of the growing season is governed by the occurrence of the latest spring frost and the earliest fall frost. These average and extreme dates and the average frost-free period for selected stations are shown in Table 4. The average frost-free period ranges from a low of 95 days at Upper Stewiacke to a high of 148 days at Rawdon. The range in average frost-free period is illustrated in Figure 7. In Table 5, frost data for selected stations are expanded to show the calculated probability of frost occurrence after certain dates in the spring and before certain dates in the fall.

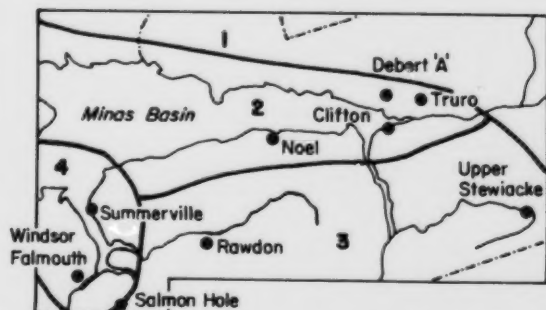


Figure 4. Climatic Regions and Stations (Dzikowski 1984)

Legend

- 1 Northern Nova Scotia
- 2 Bay of Fundy
- 3 Eastern Nova Scotia
- 4 Annapolis Valley

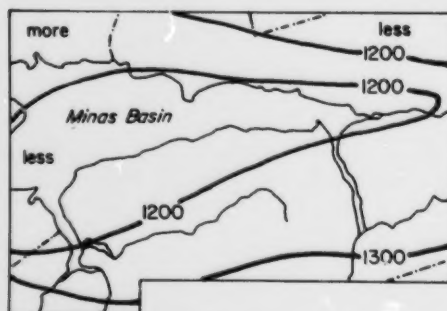


Figure 5. Annual Total Precipitation (Dzikowski 1984)

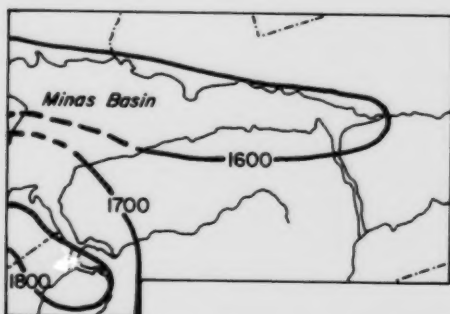


Figure 6. Annual Total Degree Days Above 5°C (Dzikowski 1984)

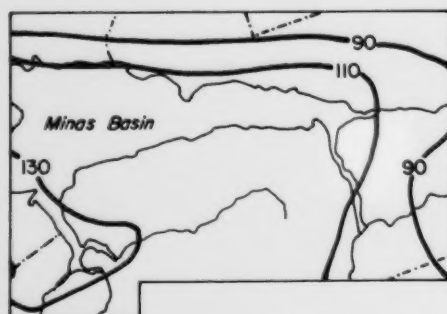


Figure 7. Average Frost Free Period (Days) (Dzikowski 1984)

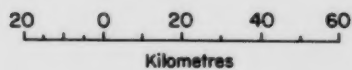


Table 1. Monthly temperature and precipitation data for representative stations

Mean data	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
DEBERT A													
Daily temp. (°C)	-6.7	-6.9	-2.3	3.5	9.3	15.0	18.3	17.7	13.4	8.0	3.1	-3.5	5.7
Snowfall (cm)	37.7	42.4	40.9	23.2	3.1	0.0	0.0	0.0	0.0	1.9	12.3	46.5	208.0
Total precip. (mm)	103.2	101.8	88.3	98.6	83.4	99.9	82.5	132.9	113.0	119.0	148.4	125.2	1296.2
TRURO													
Daily temp. (°C)	-6.8	-7.6	-2.3	2.9	8.8	14.2	17.8	17.1	12.7	7.8	2.9	-3.7	5.3
Snowfall (cm)	54.3	53.8	47.9	18.7	2.1	0.0	0.0	0.0	0.0	3.4	12.9	53.6	246.7
Total precip. (mm)	106.6	89.1	91.5	79.9	87.6	60.0	91.5	96.1	75.8	110.3	116.4	133.7	1138.7
CLIFTON													
Daily temp. (°C)	-5.6	-6.6	-1.9	3.6	9.3	14.2	18.0	17.2	13.1	8.0	3.3	-3.1	5.8
Snowfall (cm)	52.7	49.7	43.2	15.4	1.6	0.0	0.0	0.0	0.0	2.0	10.4	46.4	221.4
Total precip. (mm)	124.1	97.0	97.6	82.0	87.0	66.4	79.9	102.0	85.5	104.4	129.7	126.8	1182.4
NOEL													
Daily temp. (°C)	M	M	M	M	M	M	M	M	M	M	M	M	M
Snowfall (cm)	54.3	43.4	44.2	25.7	0.5	0.0	0.0	M	0.0	3.5	17.3	54.8	M
Total precip. (mm)	111.9	80.5	88.5	85.9	90.8	79.6	94.9	102.9	116.0	103.9	108.4	106.6	1179.3
SUMMERVILLE													
Daily temp. (°C)	-4.9	-5.2	-1.1	4.1	9.8	15.1	18.4	18.1	14.1	8.9	4.1	-2.3	6.6
Snowfall (cm)	60.9	55.8	47.6	13.2	1.9	0.0	0.0	0.0	0.0	2.8	5.1	42.5	229.8
Total precip. (mm)	118.7	87.1	88.8	86.0	75.4	64.9	61.1	97.1	86.0	88.1	100.7	120.7	1074.6
WINDSOR/FALMOUTH													
Daily temp. (°C)	-5.3	-5.6	-1.3	4.5	10.3	15.7	19.1	18.6	14.2	8.9	3.9	-2.5	6.7
Snowfall (cm)	57.1	56.1	42.0	9.3	1.5	0.0	0.0	0.0	0.0	2.5	9.2	47.4	225.5
Total precip. (mm)	134.9	119.1	105.5	79.8	85.0	68.0	71.3	89.7	91.7	104.2	129.2	142.3	1220.7
SALMON HOLE													
Daily temp. (°C)	-5.0	-5.5	-1.3	4.3	10.2	15.6	18.9	18.5	14.5	9.3	4.1	-2.4	6.8
Snowfall (cm)	54.2	51.9	36.1	10.0	0.9	0.0	0.0	0.0	0.0	1.9	9.4	43.6	208.0
Total precip. (mm)	144.4	118.0	111.3	87.9	88.5	71.2	84.0	98.1	87.3	111.7	136.1	143.8	1282.3
RAWDON													
Daily temp. (°C)	-6.1	-6.1	-2.1	3.6	9.3	14.0	18.3	17.6	13.6	8.2	2.9	-3.3	5.9
Snowfall (cm)	75.7	57.2	51.3	18.5	2.5	0.1	0.0	0.0	0.0	2.5	9.4	47.3	264.5
Total precip. (mm)	145.0	108.8	115.9	91.6	92.3	82.3	84.5	93.1	85.0	118.8	128.0	136.2	1281.5
UPPER STEWACKE													
Daily temp. (°C)	-6.0	-6.0	-1.6	3.7	9.2	14.6	18.2	17.6	13.4	8.3	3.5	-3.1	6.0
Snowfall (cm)	32.3	37.3	28.9	8.5	0.8	0.0	0.0	0.0	0.0	1.6	6.6	28.9	144.9
Total precip. (mm)	114.4	99.7	94.4	81.6	85.3	76.4	91.1	97.2	85.0	105.3	127.0	125.1	1182.5

Source: Atmospheric Environment Service 1980.

M - missing data

Table 2. Degree days above 5°C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Debert A	1.2	1.4	3.7	22.5	136.8	292.4	410.0	392.1	249.8	112.7	33.5	4.7	1660.8
Truro	1.1	0.8	4.1	17.0	123.5	274.2	399.8	377.2	239.4	106.4	33.0	5.8	1582.3
Summerville	1.4	0.5	3.2	26.0	155.9	304.9	413.6	402.2	273.8	129.9	38.1	6.3	1755.8
Windsor/ Falmouth	0.5	0.4	2.9	35.9	166.6	324.8	438.5	421.3	277.7	132.7	35.3	6.1	1842.7
Salmon Hole	1.7	0.9	3.6	31.2	165.2	320.1	431.5	417.9	281.9	139.3	41.8	6.9	1842.0
Rawdon	1.3	1.3	1.4	20.8	134.2	295.5	413.8	390.6	266.7	111.6	25.6	4.5	1667.3
Upper Stewiacke	2.0	1.2	4.0	23.7	137.7	289.1	407.9	390.2	252.1	116.2	39.7	6.0	1669.8

Source: Atmospheric Environment Service 1982.

Table 3. Degree days above 10°C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Debert A	0.0	0.0	0.3	1.6	37.4	144.3	255.0	237.1	111.5	27.4	6.8	0.3	821.7
Truro	0.0	0.0	0.2	0.9	30.2	130.5	244.9	222.6	104.4	27.1	6.9	0.4	768.1
Summerville	0.1	0.0	0.1	2.6	45.8	161.9	264.6	252.9	133.6	34.7	7.5	0.4	904.2
Windsor/ Falmouth	0.1	0.0	0.0	5.0	51.7	176.4	283.5	266.3	134.1	34.5	7.2	0.3	959.1
Salmon Hole	0.0	0.1	0.1	3.7	52.9	171.6	276.5	263.0	137.4	38.3	6.8	0.2	950.5
Rawdon	0.1	0.1	0.1	1.9	34.2	148.9	258.9	235.8	123.2	21.0	5.3	0.1	830.1
Upper Stewiacke	0.1	0.0	0.1	2.5	38.6	143.7	253.0	235.4	114.7	31.8	8.3	0.3	828.5

Source: Atmospheric Environment Service 1982.

Table 4. Average and extreme dates of frost and length of frost-free period at representative stations

Station	Elevation (m)	Last frost in spring			Average frost-free period (days)	First frost in fall		
		Earliest	Average	Latest		Earliest	Average	Latest
Debert A	44	May 14	May 26	Jun 15	120	Sept 9	Sept 24	Oct 9
Truro	40	Apr 22	May 30	Jun 14	111	Sept 1	Sept 19	Oct 6
Summerville	38	May 12	May 29	Jun 27	125	Sept 20	Oct 2	Oct 24
Windsor/ Falmouth	9	Apr 27	May 20	Jun 30	134	Aug 29	Oct 2	Oct 26
Salmon Hole	84	Apr 17	May 25	Jun 15	128	Jul 27	Oct 1	Oct 23
Rawdon	183	May 1	May 16	May 31	148	Sept 28	Oct 12	Oct 28
Upper Stewiacke	46	May 19	Jun 7	Jun 29	95	Aug 31	Sept 11	Sept 22

Source: Atmospheric Environment Service 1982.

Table 5. Probability of frost occurrence at representative stations.

	Probability of last spring frost occurring on or after dates indicated				Probability of first frost occurring on or before dates indicated			
	3 yr in 4	1 yr in 2	1 yr in 4	1 yr in 10	1 yr in 10	1 yr in 4	1 yr in 2	3 yr in 4
Debert A	May 20	May 22	June 8	June 10	Sept 10	Sept 17	Sept 22	Sept 30
Truro	May 19	June 2	June 10	June 14	Sept 7	Sept 14	Sept 20	Sept 25
Summerville	May 24	May 27	June 1	June 15	Sept 20	Sept 22	Sept 29	Oct 11
Windsor/ Falmouth	May 10	May 24	May 27	May 28	Sept 21	Sept 22	Sept 30	Oct 8
Salmon Hole	May 22	May 28	June 2	June 9	Sept 11	Sept 17	Sept 30	Oct 13
Rawdon	May 9	May 16	May 26	May 28	Sept 29	Oct 5	Oct 15	Oct 18
Upper Stewiacke	June 8	June 13	June 19	June 26	Aug 25	Sept 5	Sept 14	Sept 18

Source: Atmospheric Environment Service 1982.

The depth to which frost penetrates the soil and its duration depend upon the amount and duration of snow cover, the particle size, and moisture content of the soil, and the type of vegetation cover. In cultivated soils frost can persist for 3 to 5 months in the plow layer. At a depth of 50 cm, it can last for only 1 month in poorly drained soils beneath snow, or 4 months in soil that is well drained and exposed (Nowland and MacDougall 1973).

Vegetation and land use

The natural vegetation of the survey area is a product of its climate. However, some local variations are produced by topographic exposure and by depth, nutrient supply, and drainage status of the soils. Indigenous forest in the survey area has been greatly altered by logging, land clearing for farming, and forest fires, until little undisturbed forest remains.

In A forest classification for the Maritime Provinces Loucks (1961) classified the vegetation of the region into forest zones, ecoregions, and districts. Forest zones are defined by the dominant tree species; ecoregions are defined by similar ecological relationships between site and species; and districts are determined by physical patterns of relief, predominant soil texture, bedrock type and drainage patterns.

The survey area is located in the Windsor-Truro District of the Maritime Lowland Ecoregion of the Red Spruce-Hemlock-Pine Zone (Fig. 8). The Windsor-Truro District conforms closely to the boundaries of the Minas Lowlands physiographic region. The district surrounds Cobequid Bay and extends south from the Cobequid Upland to the Southern Upland and west to the Annapolis Valley. Characteristic tree species that form stable forest communities on zonal sites include red spruce (Picea rubens Sarg.), white spruce (Picea glauca (Moench)Voss.), black spruce (Picea mariana (Mill.)BSP.), balsam fir (Abies balsamea (L.)Mill.), white birch (Betula papyrifera Marsh.), red maple (Acer rubrum L.), hemlock (Tsuga canadensis (L.)Carr), and eastern white pine (Pinus Strobus L.). Ridges generally support deciduous species including sugar maple (Acer saccharum Marsh.), beech (Fagus grandifolia Ehrh.), and yellow birch (Betula alleghaniensis Britt.).

In the survey area, cleared and abandoned farmland often regenerates to white spruce and balsam fir while burning encourages the establishment of gray birch (Betula populifolia Marsh.), white birch, red pine (Pinus resinosa Ait.) and black spruce. Black spruce and larch (Larix laricina (DuRoi)K. Koch) are common on swampy and poorly drained areas. White elm (Ulmus americana L.) and occasionally sugar maple and beech occur on alluvial soils.

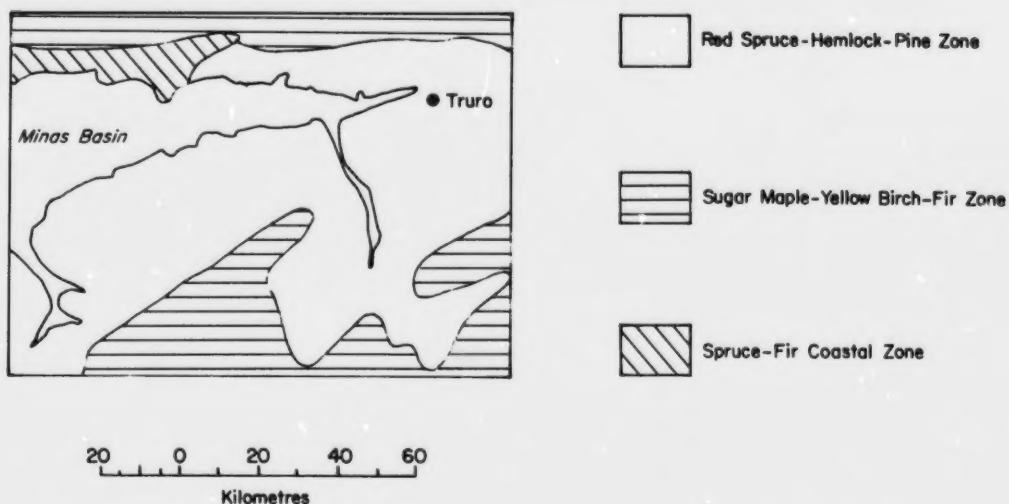


Fig. 8. Forest vegetation zones (Loucks 1961).

An estimated 20% of the land in the survey area is used for agricultural. The remaining 80% is covered mainly by forest.

Of the area in agriculture, about 45% is used for pasture, forage and livestock production. Cash crops such as barley, oats, mixed grain, wheat, clover, alfalfa, corn, soybeans, and canola are grown on about 30% of the agriculture land. About 10% is used for dairy farming, generally in areas close to Truro. Blueberries and small fruits, such as strawberries, are grown on another 10% of the agricultural land. The remaining 5% is planted to vegetables, with carrots being the major crop.

PART 2. SURVEY METHODS

Mapping methods

Soil survey staff (LRRC, Truro) reviewed published soil and geology maps to establish a soil legend. MacLaren Plansearch survey staff drew preliminary soil map unit boundaries on 1:10 000 scale black and white aerial photographs using a stereoscope to identify landform, slope and soil drainage. Preliminary map boundaries were transferred by hand from the photographs to 1:20 000 scale, photomosaic, base maps. Field observation sites were marked on the bases. MacLaren Plansearch checked the preliminary map units at the observation sites by examining soil pits and noting landscape features. Soil pits were dug, 50-60 cm deep and 40-50 cm in diameter, with a shovel and probed to 100 cm with an auger wherever possible. Soil drainage was determined using indicators such as soil color; presence of mottles; depth, size and brightness of the mottles; gleyed horizons and presence or absence of a water table. Soil particle size was estimated by feel and percent slope was determined using a clinometer. Stoniness, rockiness and soil transmissibility classes were estimated in the field (Day 1982).

There were a total of 9 050 field sites -- 250 per full map sheet (3 000 ha) or 1 site per 12 ha. Information was recorded on field sheets and followed standard coding conventions (Day 1982). The sites were chosen in one of three ways:

1. Reconnaissance transects were placed by the surveyor across the grain of the landscape to traverse as many soil units on the map as possible. About 20% of the observation sites were located using reconnaissance transects.
2. Free sites were used at the surveyor's discretion to inspect areas not given adequate representation by the reconnaissance transects. These sites were located primarily by the surveyor. The Scientific Authority (SA) requested additional free sites in anomalous areas. About 40% of the observations were free sites.
3. Delineation transects were placed in randomly selected units on completed maps using methods described by Wang (1982). For the first 2 years of the survey these transects were used by MacLaren Plansearch to field check map accuracy and improved our understanding of the soil-landscape relationships in the area, thus enabling improvements to the legend. The transects were replaced by free sites for the last 2 years of the survey. About 40% of the observations were located using delineation transects.

The map was given to the SA for correlation after all map unit boundaries and symbols had been transferred to the base. The SA examined a further 30-50 sites per full map sheet and compared his findings with the mapped information. The surveyors used free sites to resolve areas of discrepancy, at which point the SA approved the map. MacLaren Plansearch staff chose and sampled phase 2 sample sites after the map was approved.

Sampling and laboratory methods

The surveyors took soil samples from 5% of their observation sites, collecting about 2 kg of soil from the major horizons. These were called phase 1 samples. Phase 2 or benchmark sites (190 sites in total) were distributed evenly over the survey area. They were used to provide more detailed description and analysis of the major soils.

The Quebec Provincial Soils Laboratory analyzed all the samples for MacLaren Plansearch. Phase 1 samples were analyzed for pH and particle size. Phase 2 samples were analyzed for pH, particle size, organic carbon, cation exchange capacity, exchangeable cations, bulk density, hydraulic conductivity, and water retention.

The methods used follow those in the Manual on soil sampling and methods of analysis (McKeague 1978). The analytical method numbers from McKeague (1978) are indicated in parentheses:

- pH in CaCl_2 (3.11) and H_2O (3.13)
- Organic carbon by wet oxidation (3.613)
- Organic matter was determined by multiplying the % organic carbon by 1.7
- Permanent charge cation exchange capacity (CEC) and exchangeable cations (Ca, Mg, K, Al) by NaCl extraction (3.31)
- Particle size by the hydrometer method (2.121) after pretreatments to remove soluble salts, organic matter, and carbonates (2.112)
- Bulk density by the core method (2.21)
- Saturated hydraulic conductivity by the core method (2.51)
- Water retention using cores at 5 kPa on the tension table (2.42) and at 10 and 33 kPa in the pressure plate extractor
- Water retention at 1500 kPa using ground samples (2.42)

Cartographic methods

MacLaren Plansearch used the Intergraph Geographical Information System at Photoshur Inc. to digitize the maps approved by the SA. Photoshur submitted the maps to the Land Resource Research Centre (LRRC) in Ottawa for verification and the correction of minor errors.

Data analysis and storage

MacLaren Plansearch supplied all data on floppy diskette and on paper. Detailed descriptions of individual sites are kept on open file at LRRC, Truro and a summary of this information is found in this report. Summary data are grouped as follows, unless indicated differently in Part 3:

Upper soil material: includes Ae and all B horizons except compact BC.

Lower soil material: includes all C and compact BC horizons.

Soil naming conventions

Soils were coded as three letter symbols followed by two digit modifiers (Fig. 9). The soil name code carries information on soil drainage, the particle size and the mode of deposition of the lower soil material. The modifier describes the depth and particle size of the upper soil material (Table 6). Modifiers are not used for land types, alluvial soils, or marine soils.

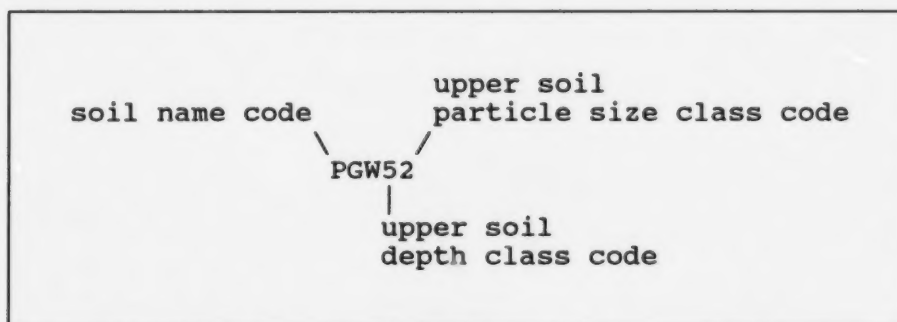


Fig. 9. Sample soil symbol

Table 6. Upper soil codes

Code	Particle size classes	Code	Depth classes (cm)
0	Fine loamy	2	20-50
1	Fine loamy-gravelly	5	50-80
2	Coarse loamy	8	>80
3	Coarse loamy-gravelly	X	cemented layers present
4	Fine sandy		
5	Sandy		
6	Sandy-gravelly		
7	Loamy-skeletal		
8	Sandy-skeletal		
9	Fragmental		
P	Peat		

Map unit naming conventions

The numerator of the map unit symbol contains soil information and the denominator shows landscape information (Fig. 10).

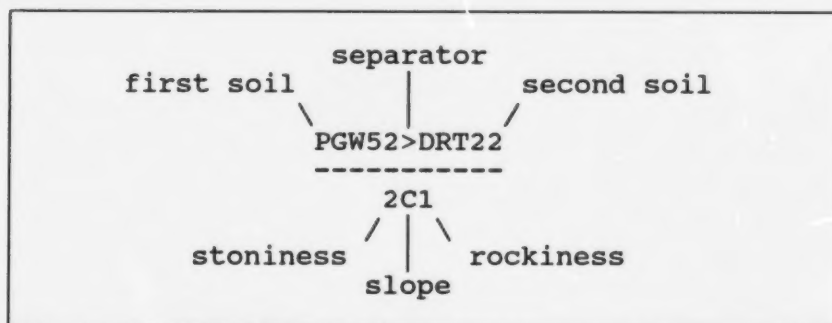


Fig. 10. Sample soil map unit symbol

A maximum of two soils are coded in the numerator. A single soil code is used for simple map units where one soil occupies over 80% of the area. In compound map units, where two soil symbols are used, the separator '=' shows that each soil occupies about 50% of the area; the separator '>' shows that the first soil occupies about 70% of the area and the second soil about 30%. Soil symbols are listed in alphabetical order if the separator is '='.

Tables 7, 8 and 9 show the class limits for the landscape attributes: stoniness, slope and rockiness respectively. Landscape attributes are not included for land types. Land types map unit symbols begin with the letter Z.

Stoniness classes are defined in terms of the amount of surface stones greater than 25 cm in diameter (or greater than 38 cm if flat), and their spacing (Table 7). Classes 0 and 1 (nonstony and slightly stony) are coded blank on the soil map.

Table 7. Stoniness classes

Class code	Class name	Surface covered (%)	Distance between stones (m)
0	Nonstony	<.01	>25
1	Slightly stony	0.01-0.1	8-25
2	Moderately stony	0.1-3	1-8
3	Very stony	3-15	0.5-1
4	Exceedingly stony	15-50	0.1-0.5
5	Excessively stony	>50	<0.1

The slope class of a map unit refers to the slope range which best describes the general steepness of slope (Table 8).

Table 8. Slope classes

Code	Slope (%)	Description
B	0 - 2	Level to nearly level
C	2 - 5	Very gentle slopes
D	5 - 9	Gentle slopes
E	9 - 15	Moderate slopes
F	15 - 30	Strong slopes
G	30 - 45	Very strong slopes

Rockiness refers to bedrock outcrops. Classes are defined by the amount of surface covered by bedrock and the distance between bedrock exposures (Table 9). Class 0 (nonrocky) appears as a blank on the soil maps.

Table 9. Rockiness classes

Class code	Class name	Surface covered (%)	Distance between outcrops (m)
0	Nonrocky	<2	>100
1	Slightly rocky	2-10	35-100
2	Moderately rocky	10-25	10-35
3	Very rocky	25-50	3.5-10
4	Exceedingly rocky	50-90	<3.5
5	Excessively rocky	>90	

Soil correlation and key

The soils in this project have been correlated with previous soil survey reports of the area (Table 10). To find more information on Springhill soils, for example, refer to the Portapique and Shulie names in the first Colchester report and the Hansford name in the Hants and second Colchester reports.

Table 10. Correlation of soil names with county soil surveys

This survey	Colchester ¹	Colchester ²	Hants ³
Acadia	Acadia	Acadia	Acadia
Bridgeville	Cumberland	Cumberland	Cumberland
Canaan	----	----	----
Castley	Peat	Castley	Peat
Chaswood	Cumberland	Cumberland	Cumberland
Cheggoggin	Acadia	Acadia	Acadia
Cherryfield	Stewiacke	Stewiacke	Stewiacke
Comeau	Hebert	Hebert	Hebert
			Torbrook
Cornwallis	----	----	Cornwallis
Cumberland	Cumberland	Cumberland	Cumberland
Debert	Pugwash	Pugwash	Pugwash
	Truro	Woodville	Truro
Dufferin	Muck	Castley	Swamp
	Swamp		
Economy	Portapique	Hansford	Hansford
	Shulie	Portapique	
Falmouth	Queens	Queens	Queens
	Nappan		
Fash	----	Fash	----
Glenholme	Truro	Truro	Truro
Hansford	Portapique	Hansford	Hansford
	Shulie		
Hantsport	Harmony	Woodbourne	Hantsport
	Diligence	Millbrook	
		Diligence	
Hebert	Hebert	Hebert	Hebert
			Torbrook
Kingsville	Queens	Queens	Queens
	Nappan		
Lawrencetown	----	Fash	----
Mahone	Harmony	Woodbourne	Hantsport
	Diligence	Millbrook	
		Diligence	
Masstown	Pugwash	Pugwash	Pugwash
	Truro	Woodville	Truro

(continued)

Table 10. Correlation of soil names (continued)

This survey	Colchester ¹	Colchester ²	Hants ³
Meteghan	Hebert	Hebert	Hebert
Onslow	Truro	Truro	Torbrook
Pugwash	Pugwash	Pugwash	Pugwash
	Truro	Woodville	Truro
Queens	Queens	Queens	Queens
Rossignol	Swamp	Castley	Peat
Springhill	Portapique	Hansford	Hansford
	Shulie		
South Alton	----	----	----
Stewiacke	Stewiacke	Stewiacke	Stewiacke
Truro	Truro	Truro	Truro
Vernon Mines	----	----	----
Woodbourne	Harmony	Woodbourne	Hantsport
		Millbrook	

¹Wicklund and Smith (1948).

²Webb et al. (in prep.).

³Cann et al. (1954).

Some soil names are different because of differing naming conventions. In this report there is a new name whenever there is a change in the particle size of the lower soil material, in the mode of deposition or in the drainage. In both Colchester reports and the Hants report, there is no new name for a change in drainage. Instead, drainage is shown by crosshatching on the map (Wicklund 1948), by modifiers of the soil symbol (Webb in prep.) or by both crosshatching and symbol modifiers (Cann et al. 1954).

Other names are different because the method of grouping soils is different. For example, Hansford soils in this report have 20-35% gravel of any kind in their lower soil material. In previous reports, the gravel had to be of a certain geological type or a new name was required.

The soils in this survey are keyed in Table 11 according to mode of deposition, particle size of the lower soil material and drainage. Some soils have been assigned names according to established naming conventions but do not occur as mappable units. These soils are inclusions in the map units of closely associated soils. For example, QUE50 soils occur, but not as mappable units, so they have been included in the QUE52 map unit.

Table 11. Soil key

Soils Developed on Glacial Till Deposits

Fine loamy lower soil material

Moderately well drained	Falmouth	FUH
Imperfectly drained	Queens	QUE
Poorly drained	Kingsville	KSV

Fine loamy-gravelly lower soil material

Moderately well drained	Woodbourne	WOB
Imperfectly drained	Hantsport	HTP
Poorly drained	Mahone	MHO

Coarse loamy lower soil material

Well to moderately well drained	Pugwash	PGW
Imperfectly drained	Debert	DRT
Poorly drained	Masstown	MSW

Coarse loamy-gravelly lower soil material

Well to moderately well drained	Hansford	HFD
Imperfectly drained	Springhill	SGL
Poorly drained	Economy	ECY

Loamy-skeletal lower soil material

Well drained	Morristown	MRW
Imperfectly drained	Factorydale	FAC
Poorly drained	Newtonville	NTV

Soil veneer over bedrock

Well drained	South Alton	SHN
Imperfectly drained	Vernon Mines	VRN
Poorly drained	Canaan	CAA

Soils Developed on Lacustrine Deposits

Fine loamy soil material

Moderately well drained	Avonport	AVP
Imperfectly drained	Fash	FSH
Poorly drained	Lawrencetown	LWR

(continued)

Table 11. Soil key (continued)

Soils Developed on Glaciofluvial Deposits

Fine sandy lower soil material

Well drained	Truro	TUO
Imperfectly drained	Onslow	OSW
Poorly drained	Glenholme	GNH

Sandy lower soil material

Rapidly drained	Cornwallis	CNW
Imperfectly drained	Kingsport	KGP
Poorly drained	Millar	MLL

Sandy-gravelly to sandy-skeletal lower soil material

Rapidly to well drained	Hebert	HBT
Imperfectly drained	Comeau	CMU
Poorly drained	Meteghan	MGA

Soils Developed on Alluvial Deposits

Fine loamy soil material

Imperfectly drained	Cherryfield	CYF
Poorly drained	Stewiacke	STW

Coarse loamy to sandy-gravelly soil material

Well drained	Cumberland	CBR
Imperfectly drained	Bridgeville	BGE
Poorly drained	Chaswood	CHW

Soils Developed on Organic Deposits (Very poorly drained)

Bog	Castley	CSY
Forested swamp	Dufferin	DFN
Fen	Rossignol	RGO

(continued)

Table 11. Soil key (continued)

Soils Developed on Dyked Marine Sediments

Coarse loamy soil material	Grand Pre GPR
Fine loamy soil material	Acadia ACA
Fine loamy soil material stratified with peat	Chegoggin CGN

Miscellaneous Land Types

Coastal beach	ZCB
Escarpment	ZES
Gravel pit	ZGP
Gully	ZGY
Not surveyed	ZNS
Salt marsh	ZSM
Urban land	ZUL
Water	ZZZ

PART 3. SOIL AND MAP UNIT DESCRIPTIONS

The description of soils and map units that follow provide more detail than the map legend. The map legend contains the modal soil concepts but this section contains a description of the soils as they were found in the field.

Data for sand, silt, clay, bulk density, hydraulic conductivity pH, CEC, and organic matter are reported as mean values; range in values; and number (n=) of samples analyzed.

Terms and abbreviations used in Part 3 are described in the Appendix if not defined elsewhere in the report.

ACADIA SOILS (ACA)

Soil material and landform

Acadia soils have developed on fine loamy, dyked, marine sediments. They are dominantly imperfectly drained and are found on level to nearly level dykelands.

Soil material	: Fine loamy (includes fine silty) dyked marine sediments
Drainage range:	: Moderately well to poor; dominantly imperfect
Slope range	: 0-2%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: Absent

Location and extent

Acadia soils cover about 2% or 2 499 ha (122 areas) of the survey area. Acadia soils are located at points along the Colchester County coastline of Cobequid Bay and at the mouths of major tidal rivers. Acadia soils are uncommon along the coastline of Minas Basin in Hants County, however significant areas are located at the mouths of the Avon, St. Croix, and Kennetcook rivers.

Profile characteristics of Acadia soils (ACA)

Acadia soils have 20-50 cm of friable to firm, fine loamy, soil over friable to firm, fine loamy, lower soil material.

Upper soil material (Ap horizons including soil disturbed by landforming)

Thickness range	: 20-50 cm
Consistence range	: Friable to firm
Particle size class	: Fine loamy (includes fine silty)
% sand	: 9 (range: 1-42; n=11)
% silt	: 61 (range: 46-69; n=11)
% clay	: 30 (range: 18-41; n=11)
Coarse fragments ($\frac{1}{8}$ volume)	: 0
Bulk density (g/cm^3)	: 1.2 (range: 1.1-1.4; n=9)
Hydraulic conductivity (cm/h)	: 4.7 (range: 0.3-14.2; n=9)
pH (H_2O)	: 5.8 (range: 4.9-6.7; n=11)
CEC (meg/100g)	: 7.8 (range: 3.1-13.4; n=5)
% organic matter	: 1.9 (range: 0.5-3.1; n=5)
% organic matter in Ap	: 2.2 (range: 1.1-3.1; n=4)

Lower soil material

Consistence range	: Friable to firm
Particle size class	: Fine loamy (includes fine silty)
% sand	: 10 (range: 0-21; n=22)
% silt	: 60 (range: 42-71; n=22)
% clay	: 30 (range: 18-58; n=22)
Coarse fragments ($\frac{1}{8}$ volume)	: 0
Bulk density (g/cm^3)	: 1.4 (range: 1.1-1.7; n=18)
Hydraulic conductivity (cm/h)	: 1.9 (range: 0-5.8; n=18)
pH (H_2O)	: 5.8 (range: 3.5-7.0; n=22)
CEC (meg/100g)	: 9.2 (range: 5.8-15.2; n=10)

Map units

ACA. Acadia soils are the dominant soil map unit on dykelands.

ACA-GPR. Acadia-Grand Pre map units occur on 326 ha or with about 13% of the Acadia soil areas. Map units occur at the mouth of the Salmon River where fine sandy sediment carried by the river has mixed with fine loamy marine sediments deposited by the tides of Cobequid Bay.

BRIDGEVILLE SOILS (BGE)

Soil material and landform

Bridgeville soils have developed on coarse loamy to sandy-gravelly alluvium. They are imperfectly drained and are found on level to nearly level floodplains.

Soil material	: Coarse loamy to sandy-gravelly alluvium
Drainage	: Imperfect with frequent flooding
Slope range	: 0-2%
Stoniness range	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Bridgeville soils cover about 1% or 1 124 ha (71 areas) of the survey area. Over 50% of the Bridgeville soils are found north of Cobequid Bay. Most of the remaining areas are located between Old Barns and Stewiacke.

Profile characteristics of Bridgeville soils (BGE)

Bridgeville soils have over 80 cm of friable to loose, coarse loamy to sandy-gravelly, stratified, soil material. Particle size can change abruptly with depth and frequently coarse loamy soil overlies sandy-gravelly soil within 1 m of the surface.

Soil material (all soil material except Ap and Ah horizons)

Thickness range	: Greater than 80 cm
Consistence range	: Friable to loose
Particle size class range	: Coarse loamy to sandy-gravelly
Coarse fragments (% volume)	: 10-35
pH (H ₂ O)	: 5.3 (range: 4.5-6.3; n=9)
CEC (meg/100g)	: 4.3 (range: 2.6-7.5; n=6)
% organic matter in Ap	: 1.5 (range: 0.7-2.4; n=3)

Map units

BGE. Bridgeville soils are found in imperfectly drained depressions and drainage channels.

BGE-CHW. Chaswood soils are located in poorly drained depressions and drainage channels close to the river where high water tables are maintained for extended periods. Bridgeville soils are located at higher elevations than Chaswood soils.

BGE-CBR. Cumberland soils are located on the elevated areas of the floodplain. Bridgeville soils are found in imperfectly drained depressions and drainage channels.

CANAAN SOIL GROUP (CAA23, CAA52)

Soil material and landform

Soils of the Canaan group have developed on coarse loamy and loamy-skeletal till veneers over bedrock. They are poorly drained and are found on very gentle slopes.

Soil material	: Coarse loamy to loamy-skeletal till veneer
Drainage	: Poor
Slope range	: 2-5%
Stoniness range	: Nonstony to slightly stony; dominantly slightly stony
Rockiness	: Slightly rocky
Depth of constricting layer	: 20-80 cm
Kind of constricting layer	: Bedrock

Location and extent

Soils of the Canaan group cover less than 0.1% or 75 ha (5 areas) of the survey area. They are found close to Cobequid Bay from Bramber to Maitland in Hants County and commonly occur at the interface of the Queens and Hantsport soils.

Profile characteristics of Canaan 23 soils (CAA23)

Canaan 23 soils have 20-50 cm of friable, coarse loamy-gravelly, soil over bedrock.

Soil material (all soil material overlying bedrock except Ap and Ah horizons)

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy-gravelly
% sand	: 41 (range: 40-42; n=2)
% silt	: 44 (range: 41-46; n=2)
% clay	: 15 (range: 14-17; n=2)
Coarse fragments ($\frac{1}{2}$ volume)	: 20-35
Bulk density (g/cm ³)	: 1.4 (range: 1.3-1.4; n=2)
Hydraulic conductivity (cm/h)	: 4.1 (range: 3.7-4.5; n=2)
pH (H ₂ O)	: 5.7 (range: 5.6-5.7; n=2)
CEC (meg/100g)	: 3.0 (range: 2.9-3.2; n=2)

Profile characteristics of Canaan 52 soils (CAA52)

Canaan 52 soils have 50-80 cm of friable, coarse loamy, soil over bedrock. They are similar to Canaan 23 soils, but are deeper and contain less gravel. Canaan 23 soil data can be used to estimate the profile characteristics of Canaan 52 soils.

Map units

CAA23; CAA52. Canaan 23 and 52 soils are found in very gentle sloping depressions that collect runoff and seepage from surrounding uplands. Internal drainage is restricted by the underlying bedrock and water tables remain at or near the soil surface for extended periods throughout the growing season.

CAA52-MSW52. Canaan 52 and Masstown 52 soils are randomly mixed in the map unit. Landscape and drainage conditions are similar to Canaan 52 map units.

CUMBERLAND SOILS (CBR)

Soil material and landform

Cumberland soils have developed on coarse loamy to sandy-gravelly alluvium. They are well drained soils and are found on level to very gentle sloping floodplains.

Soil material	: Coarse loamy to sandy-gravelly alluvial sediments
Drainage range	: Rapid to moderately well; dominantly well with occasional flooding
Slope range	: 0-5%; dominantly 0-2%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Cumberland soils cover less than 1% or 772 ha (58 areas) of the survey area. About 75% of Cumberland soils are found in the northern part of the survey area between Bass River and Truro. The rest of the soils occur in small pockets adjacent to streams and rivers in the southern part of the survey area.

Profile characteristics of Cumberland soils (CBR)

Cumberland soils have over 80 cm of friable to loose, coarse loamy to sandy-gravelly, stratified, soil material. Particle size can change abruptly with depth and frequently coarse loamy material overlies sandy-gravelly material within 1 m of the surface.

Soil material (all soil material except Ap and Ah horizons)

Thickness range	: Greater than 80 cm
Consistence range	: Friable to loose
Particle size class range	: Coarse loamy to sandy-gravelly
% sand	: 66 (range: 60-71; n=2)
% silt	: 22 (range: 19-24; n=2)
% clay	: 12 (range: 10-16; n=2)
Coarse fragments (% volume)	: 10-35
Bulk density (g/cm ³)	: 1.3 (range: 1.2-1.5; n=2)
Hydraulic conductivity (cm/h)	: 16 (range: 11-21; n=2)
pH (H ₂ O)	: 5.1 (range: 5.0-5.1; n=2)
CEC (meg/100g)	: 2.7 (range: 1.3-4.1; n=2)
% organic matter in Ap	: 5.9

Map units

CBR. Cumberland soils are located on the elevated, well drained, areas of the floodplain.

CBR-CHW. Chaswood soils are located in poorly drained depressions and drainage channels close to the river where high water tables are maintained for extended periods. Cumberland soils are located at higher elevations than Chaswood soils.

CBR-BGE. Cumberland soils are located on the elevated, well drained, areas of the floodplain. Bridgeville soils are found in imperfectly drained depressions and drainage channels.

CHASWOOD SOILS (CHW)

Soil material and landform

Chaswood soils have developed on coarse loamy to sandy-gravelly alluvium. They are poorly drained and are found on level to nearly level floodplains.

Soil material	: Coarse loamy to sandy-gravelly alluvium
Drainage	: Poor with very frequent flooding
Slope range	: 0-2%
Stoniness range	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Chaswood soils cover about 1% or 1 008 ha (78 areas) of the survey area. Chaswood soils are found on floodplains adjacent to the larger rivers between Bass River and Truro and near Windsor.

Profile characteristics of Chaswood soils (CHW)

Chaswood soils have over 80 cm of friable, coarse loamy to sandy-gravelly, stratified, soil material. Particle size can change abruptly with depth and frequently coarse loamy soil overlies sandy-gravelly soil within 1 m of the surface. Occasionally peaty surface layers and fine loamy subsurface layers are found.

Soil material (all soil material except Ap and Ah horizons)

Thickness range	: Greater than 80 cm
Consistence range	: Friable to loose
Particle size class	: Coarse loamy to coarse loamy-gravelly
% sand	: 57 (range: 45-83; n=4)
% silt	: 30 (range: 17-41; n=4)
% clay	: 13 (range: 6-17; n=4)
Coarse fragments (% volume)	: 10-35
pH (H ₂ O)	: 5.0 (range: 3.8-5.5; n=4)
CEC (meg/100g)	: 4.8 (range: 2.5-7.2; n=4)
% organic matter	: 0.3 (range: 0.2-0.3; n=2)

Map units

CHW. Chaswood map units are located in poorly drained depressions and drainage channels close to the river. These units have water tables at or near the surface and remain saturated for extended periods throughout the growing season. Chaswood map units are frequently associated with organic soils.

COMEAU SOIL GROUP (CMU23, CMU53)

Soil material and landform

Soils of the Comeau group have developed on coarse loamy-gravelly over sandy-gravelly to sandy-skeletal glaciofluvial sediments. They are imperfectly drained and are found on level to very gentle slopes.

Lower soil material	: Sandy-gravelly to sandy-skeletal
Drainage	: Imperfect
Slope range	: 0-5%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Soils of the Comeau group cover less than 1% or 615 ha (52 areas) of the survey area. About 75% of the Comeau soils are found between Truro and Bass River. The rest of the soils are found in the Walton to Maitland area.

Profile characteristics of Comeau 23 soils (CMU23)

Comeau 23 soils have 20-50 cm of very friable to friable, coarse loamy-gravelly, soil over loose, sandy-gravelly to sandy-skeletal, lower soil material. They are similar to Comeau 53 soils but have a thinner upper soil layer. The Comeau 53 soil data can be used to estimate the profile characteristics of Comeau 23 soils.

Profile characteristics of Comeau 53 soils (CMU53)

Comeau 53 soils have 50-80 cm of very friable to friable, coarse loamy-gravelly, soil over loose, sandy-gravelly to sandy-skeletal, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence range	: Very friable to friable
Particle size class	: Coarse loamy-gravelly
% sand	: 57
% silt	: 31
% clay	: 12
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 4.4
CEC (meg/100g)	: 4.5
% organic matter	: 4.0
% organic matter in Ap	: 8.0

Lower soil material

Consistence	: Loose
Particle size class	: Sandy-gravelly to sandy-skeletal
% sand	: 91
% silt	: 5
% clay	: 4
Coarse fragments (% volume)	: 20-50
CEC (meg/100g)	: 0.6

Map units

CMU23, CMU53. Comeau 23 and 53 soils are found in imperfectly drained depressions and channels where shallow water tables persist during the spring and fall.

CMU53-HBT23. Comeau 53 soils are found in imperfectly drained depressions and channels. Hebert 23 soils are found on well to rapidly drained slopes.

CMU53-MGA53. Meteghan soils are found in poorly drained depressions and channels where shallow water tables persist for most of the growing season. Comeau soils are found at higher elevations than Meteghan soils.

CORNWALLIS 85 SOILS (CNW85)

Soil material and landform

Cornwallis 85 soils have developed on sandy glaciofluvial sediments. They are rapidly drained and are found on level to moderate slopes.

Lower soil material	: Sandy glaciofluvial sediments
Drainage range	: Rapid to well; dominantly rapid
Slope range	: 0-15%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Cornwallis 85 soils cover less than 1% or 313 ha (36 areas) and are scattered throughout the survey area.

Profile characteristics of Cornwallis 85 soils (CNW85)

Cornwallis 85 soils have over 80 cm of very friable to loose sand containing less than 2% coarse fragments. They have a low water holding capacity and are droughty during dry summers.

Map units

CNW85. Cornwallis 85 map units are found on small sandy hills and terraces.

CASTLEY 8P SOILS (CSY8P)

Soil material and landform

Castley 8P soils have developed on fibric sphagnum peat over mesic sedge peat. They are very poorly drained and are found on level to nearly level flat and domed bogs.

Soil material	: Greater than 80 cm of fibric to mesic peat
Drainage	: Very poor with very frequent flooding
Slope range	: 0-2%; dominantly 0-0.5%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Castley 8P soils cover less than 1% or 381 ha (54 areas) and are found throughout the survey area. Significant areas of Castley 8P soil are found in the Kennetcook to Noel and Windsor to Stanley areas in Hants County.

Profile characteristics of Castley 8P soils (CSY8P)

Castley 8P soils have over 80 cm of organic soil over mineral soil material. Surface layers of poorly decomposed sphagnum peat overlie layers of moderately decomposed sedge peat.

Map units

CSY8P. Castley 8P map units are located in very poorly drained depressions. They have water tables at or above the soil surface and remain saturated for most of the year.

CHERRYFIELD SOILS (CYF)

Soil material and landform

Cherryfield soils have developed on fine loamy, alluvium. They are imperfectly drained and are found on level to nearly level floodplains.

Soil material	: Fine loamy alluvium (includes fine silty)
Drainage	: Imperfect with frequent flooding
Slope range	: 0-2%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Cherryfield soils cover less than 1% or 533 ha (21 areas) of the survey area. They are located along the Bass, Debert, and Great Village rivers. Smaller areas of Cherryfield soils can be found near Stewiacke and between Truro and Clifton.

Profile characteristics of Cherryfield soils (CYF)

Cherryfield soils have over 80 cm of friable to firm, fine loamy soil material.

Soil material (all soil material except Ap and Ah horizons)

Thickness range	: Greater than 80 cm
Consistence range	: Friable to firm
Particle size class	: Fine loamy (includes fine silty)
% sand	: 14 (range: 12-18; n=3)
% silt	: 64 (range: 62-66; n=3)
% clay	: 22 (range: 20-25; n=3)
Coarse fragments ($\frac{1}{2}$ volume)	: 0
Bulk density (g/cm^3)	: 1.4 (range: 1.3-1.4; n=3)
Hydraulic conductivity (cm/h)	: 1.5 (range: 0.6-2.1; n=3)
pH (H_2O)	: 5.4 (range: 5.1-5.8; n=3)
CEC (meg/100g)	: 7.6 (range: 7.1-8.4; n=3)
% organic matter in Ap	: 2.2

Map units

CYF. Cherryfield map units are found on the better drained, fine loamy floodplains.

CYF-STW. Cherryfield soils are found with Stewiacke soils on about 50% or 271 ha of the Cherryfield soil areas. The Stewiacke soils are found in depressions and at lower elevations than Cherryfield soils. These units are found near the confluence of the North and Salmon Rivers, north of Truro.

DUFFERIN SOIL GROUP (DFN5P, DFN8P)

Soil material and landform

Soils of the Dufferin group have developed on mesic to humic forest peat. They are very poorly drained and are found on level to nearly level forested swamps.

Soil material	: Greater than 50 cm of mesic to humic peat
Drainage	: Very poor with very frequent flooding
Slope range	: 0-2%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Soils of the Dufferin group cover less than 1% or 854 ha (75 areas) of the survey area. Most of the Dufferin soils are located between Bass River and Truro and between Bramber and Windsor. Smaller areas are found in eastern Hants County and between Old Barns and Stewiacke.

Profile characteristics of Dufferin 5P soils (DFN5P)

Dufferin 5P soils have 50-80 cm of organic soil over mineral soil material. Surface layers of moderately decomposed forest peat overlie well decomposed forest peat. The volume of wood fragments in the peat is less than 5%. The particle size class of the mineral material ranges widely and usually corresponds to the adjacent mineral soils.

Profile characteristics of Dufferin 8P soils (DFN8P)

Dufferin 8P soils have greater than 80 cm of organic soil over mineral soil material. The organic soil material is derived from moderately to poorly decomposed forest peat. Dufferin 8P soils are similar to, but deeper than, Dufferin 5P soils.

Map units

DFN5P; DFN8P. Dufferin map units are found in very poorly drained depressions that collect runoff and seepage from the surrounding uplands. The units have water tables at or above the surface and remain saturated for most of the year. Dufferin map units are covered with forest swamp vegetation.

DEBERT SOIL GROUP (DRT22, DRT52, DRT82)

Soil material and landform

Soils of the Debert group have developed on coarse loamy till. They are imperfectly drained and are found on level to strong slopes.

Lower soil material	: Coarse loamy till
Drainage	: Imperfect
Slope range	: 0-30%; dominantly 2-9%
Stoniness range	: Nonstony to moderately stony; dominantly nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: 20 to greater than 80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Debert group cover about 22% or 22 666 ha of the survey area. Over 80% of the soils are found south of Cobeguid Bay.

Profile characteristics of Debert 22 soils (DRT22)

Debert 22 soils have 20-50 cm of friable, coarse loamy soil over firm, coarse loamy, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 51 (range: 31-71; n=4)
% silt	: 37 (range: 17-52; n=4)
% clay	: 12 (range: 8-17; n=4)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.6 (range: 1.5-1.6; n=2)
Hydraulic conductivity (cm/h)	: 0.5 (range: 0.07-0.8; n=2)
pH (H_2O)	: 5.2 (range: 4.6-6.1; n=4)
CEC (meg/100g)	: 0.8 (range: 0.7-0.9; n=2)
% organic matter	: 0.8 (range: 0.8-0.9; n=2)
% organic matter in Ap	: 2.3

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy
% sand	: 46 (range: 23-58; n=4)
% silt	: 41 (range: 26-59; n=4)
% clay	: 13 (range: 8-17; n=4)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.8 (range: 1.7-1.9; n=2)
Hydraulic conductivity (cm/h)	: 0.2 (range: 0.09-0.4; n=2)
pH (H_2O)	: 5.4 (range: 5.1-5.8; n=4)
CEC (meg/100g)	: 2.5 (range: 1.8-3.3; n=2)

Profile characteristics of Debert 52 soils (DRT52)

Debert 52 soils have 50-80 cm of friable, coarse loamy, soil over firm, coarse loamy, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 55 (range: 41-70; n=9)
% silt	: 31 (range: 19-41; n=9)
% clay	: 14 (range: 11-17; n=9)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.5 (range: 1.4-1.7; n=3)
Hydraulic conductivity (cm/h)	: 2.8 (range: 1.0-6.0; n=3)
pH (H_2O)	: 5.5 (range: 4.4-6.4; n=8)
CEC (meg/100g)	: 2.5 (range: 0.7-3.5; n=7)
% organic matter	: 1.6 (range: 0.1-4.2; n=7)
% organic matter in Ap	: 2.0 (range: 0.2-4.7; n=3)

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy
% sand	: 59 (range: 49-62; n=6)
% silt	: 29 (range: 27-37; n=6)
% clay	: 12 (range: 11-14; n=6)
Coarse fragments ($\frac{1}{8}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.8 (range: 1.7-1.8; n=2)
Hydraulic conductivity (cm/h)	: 0.2 (range: 0.1-0.2; n=2)
pH (H_2O)	: 5.8 (range: 5.3-6.4; n=6)
CEC (meg/100g)	: 3.6 (range: 3.1-4.4; n=5)

Profile characteristics of Debert 82 soils (DRT82)

Debert 82 soils have greater than 80 cm of friable, coarse loamy, soil over firm, coarse loamy, lower soil material.

Upper soil material

Thickness range	: Greater than 80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 66 (range: 60-72; n=2)
% silt	: 23 (range: 21-25; n=2)
% clay	: 11 (range: 7-15; n=2)
Coarse fragments ($\frac{1}{8}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.5 (range: 1.5-1.6; n=2)
Hydraulic conductivity (cm/h)	: 1.7 (range: 1.3-2.1; n=2)
pH (H_2O)	: 5.0 (range: 4.7-5.3; n=2)
CEC (meg/100g)	: 2.8 (range: 2.0-3.5; n=2)
% organic matter	: 5.0 (range: 4.7-5.3; n=2)
% organic matter in Ap	: 3.9

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy
% sand	: 69 (range: 64-73; n=2)
% silt	: 19 (range: 18-21; n=2)
% clay	: 12 (range: 9-14; n=2)
Coarse fragments ($\frac{1}{8}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.7
Hydraulic conductivity (cm/h)	: 0.3
pH (H_2O)	: 5.4 (range: 5.3-5.4; n=2)
CEC (meg/100g)	: 3.1 (range: 2.9-3.3; n=2)

Map units

DRT22; DRT52; DRT82. Debert soils are located on upper slopes that have restricted surface drainage and on mid to lower slope that receive runoff and seepage.

DRT22-PGW22; DRT22-PGW52; DRT52-PGW52; DRT52-PGW82; DRT82-PGW82. Debert soils are located on mid to lower slopes that receive runoff and seepage. Pugwash soils are found on the upper slopes and knolls that have good surface drainage.

DRT22-SGL53; DRT52-SGL53. Debert and Springhill soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the gravel content of the lower soil material of both soils is close to 20%.

DRT52-OSW52. Debert and Onslow soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the particle size of the lower soil material of both soils is close to the border between coarse loamy and fine sandy.

DRT22-QUE22; DRT52-QUE22; DRT52-QUE52. Debert and Queens soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the clay content of the lower soil material of both soils is close to 18%.

DRT22-VRN23. Debert and Vernon Mines soils are randomly mixed in the map unit.

DRT22-MSW22; DRT22-MSW52; DRT52-MSW22; DRT52-MSW52; DRT82-MSW52; DRT82-MSW82. Debert soils are located on upper slopes that have restricted surface drainage and on mid to lower slopes that receive runoff and seepage. Masstown soils are found on lower slopes and in depressions that collect runoff and seepage. Masstown soils remain saturated for extended periods throughout the growing season.

ECONOMY SOIL GROUP (ECY23, ECY53, ECY83)

Soil material and landform

Soils of the Economy group have developed on coarse loamy-gravelly till. They are poorly drained and are found on level to gentle slopes.

Lower soil material	: Coarse loamy-gravelly till
Drainage	: Poor
Slope range	: 0-9%; dominantly 2-5%
Stoniness range	: Nonstony to moderately stony; dominantly slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 20 to greater than 80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Economy group cover about 2% or 2 534 ha (106 areas) of the survey area. More than half of the Economy soils are located between Walton and Maitland. Economy soils are also found in western Hants County, and in Colchester County between Old Barns and Stewiacke, and between Bass River and Truro.

Profile characteristics of Economy 23 soils (ECY23)

Economy 23 soils have 20-50 cm of friable, coarse loamy-gravelly soil over firm, coarse loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy-gravelly
% sand	: 55
% silt	: 36
% clay	: 9
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 5.6
CEC (meg/100g)	: 1.9
% organic matter	: 0.6
% organic matter in Ap	: 3.6

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy-gravelly
% sand	: 44
% silt	: 40
% clay	: 16
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 5.7
CEC (meg/100g)	: 3.9

Profile characteristics of Economy 53 soils (ECY53)

Economy 53 soils have 50-80 cm of friable, coarse loamy-gravelly soil over firm, coarse loamy-gravelly, lower soil material. They are similar to Economy 23 soils but have a deeper upper soil layer. Economy 23 soil data can be used to estimate profile characteristics for Economy 53 soils.

Profile characteristics of Economy 83 soils (ECY83)

Economy 83 soils have greater than 80 cm of friable, coarse loamy-gravelly soil over firm, coarse loamy-gravelly, lower soil material. They are similar to Economy 23 soils but have a much deeper upper soil layer. Economy 23 soil data can be used to estimate profile characteristics for Economy 83 soils.

Map units

ECY23; ECY53; ECY83. Economy map units are found in poorly drained depressions that collect runoff and seepage from the surrounding uplands. The map units are also found on flat impermeable areas where runoff is very slow and excess water ponds on the soil surface. Economy map units have water tables at or near the surface and remain saturated for extended periods throughout the growing season.

ECY23-SGL23; ECY23-SGL53; ECY53-SGL53; ECY83-SGL83. Economy soils are found on the lower slopes and in depressions that collect runoff and seepage. Economy soils remain saturated for extended periods throughout the growing season. Springhill soils are located on upper slopes that have restricted surface drainage and on mid to lower slope that receive runoff and seepage.

ECY23-MSW22; ECY23-MSW52. Economy and Masstown soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the gravel content of the lower soil material of both soils is close to 20%.

ECY53-HTP52. Economy soils are found on the lower slopes and in depressions that collect runoff and seepage. Hantsport soils are located on upper slopes that have restricted surface drainage and on mid to lower slopes that receive runoff and seepage.

FASH 80 SOILS (FSH80)

Soil material and landform

Fash 80 soils have developed on fine loamy, lacustrine, sediments. They are imperfectly drained and are found on level to nearly level slopes.

Soil material	: Fine loamy (includes fine silty) lacustrine sediments
Drainage	: Imperfect
Slope range	: 0-2%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Fash 80 soils cover less than 0.1% or 87 ha (5 areas) of the survey area and are found near Stewiacke and Windsor.

Profile characteristics of Fash 80 soils (FSH80)

Fash 80 soils have over 80 cm of friable to firm, fine loamy, soil material. The material contains no gravel and increases in bulk density with depth. Fash soils have low infiltration and hydraulic conductivity rates. Fash 80 soils are similar to Lawrencetown 80 soils but are better drained. Lawrencetown 80 soil data can be used to estimate the profile characteristics for Fash 80 soils.

Map units

FSH80. Fash 80 map units are located in depressions and on level to nearly level areas where runoff is slow and water ponds on the surface after heavy rains.

FALMOUTH 52 SOILS (FUH52)

Soil material and landform

Falmouth 52 soils have developed on coarse loamy over fine loamy till. They are moderately well drained and are found on nearly level to moderate slopes.

Lower soil material	: Fine loamy till
Drainage	: Moderately well
Slope range	: 2-15%; dominantly 2-5%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 50-80 cm
Kind of constricting layer	: Compact till

Location and extent

Falmouth 52 soils cover less than 1% or 193 ha (6 areas) of the survey area and are found in the Windsor area.

Profile characteristics of Falmouth 52 soils (FUH52)

Falmouth 52 soils have 50-80 cm of friable, coarse loamy, soil over firm, fine loamy, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 29 (range: 25-31; n=2)
% silt	: 54 (range: 52-55; n=2)
% clay	: 17 (range: 16-17; n=2)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.5
Hydraulic conductivity (cm/h)	: 0.3
pH (H_2O)	: 5.2 (range: 4.4-6.0; n=2)

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy
% sand	: 34 (range: 32-37; n=2)
% silt	: 39 (range: 35-42; n=2)
% clay	: 27 (range: 27-28; n=2)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.7
pH (H_2O)	: 5.7 (range: 5.2-6.1; n=2)

Map units

FUH52. Falmouth 52 map units are found on knolls and upper slopes that have good surface drainage.

FUH52-QUE52. Falmouth 52 map units are found on knolls and upper slopes. Queens soils are found on mid to lower slopes that receive runoff and seepage.

GLENHOLME 52 SOILS (GNH52)

Soil material and landform

Glenholme 52 soils have developed on coarse loamy over fine sandy, glaciofluvial sediments. They are poorly drained and are found on level to very gentle slopes.

Lower soil material	: Fine sandy glaciofluvial sediments
Drainage	: Poor
Slope range	: 0-5%; dominantly 0-2%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Kind of constricting layer	: Absent

Location and extent

Glenholme 52 soils cover about 0.1% or 117 ha (11 areas) of the survey area and are found between Bass River and Truro and between Bramber and Windsor.

Profile characteristics of Glenholme 52 soils (GNH52)

Glenholme 52 soils have 50-80 cm of friable, coarse loamy, soil over friable, fine sandy, lower soil material. Thin peaty layers commonly occur on the soil surface.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 66
% silt	: 24
% clay	: 10
Coarse fragments (% volume)	: Less than 5
Bulk density (g/cm ³)	: 1.2
pH (H ₂ O)	: 5.3
CEC (meg/100g)	: 4.0
% organic matter	: 0.6
% organic matter in Ap	: 12.3

Lower soil material

Consistence	: Friable to firm
Particle size class	: Fine sandy
% sand	: 88
% silt	: 6
% clay	: 6
Coarse fragments (% volume)	: Less than 5
pH (H ₂ O)	: 5.6
CEC (meg/100g)	: 1.3

Map units

GNH52. Glenholme 52 map units are found in poorly drained depressions that collect runoff and seepage from the surrounding uplands. The adjacent uplands are usually composed of Truro or Onslow soils. Glenholme 52 map units have water tables at or near the surface for extended periods throughout the growing season.

GRAND PRE SOILS (GPR)

Soil material and landform

Grand Pre soils have developed on coarse loamy, dyked, marine sediments. They are dominantly moderately well drained and are found on level to nearly level dykelands.

Soil material	: Coarse loamy dyked marine sediments
Drainage range	: Moderately well to poor; dominantly moderately well
Slope range	: 0-2%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Grand Pre soils cover less than 1% or 348 ha (11 areas) of the survey area. About 90% of the soils are located between Truro and Old Barns. Smaller areas of Grand Pre soils are found in the Windsor area.

Profile characteristics of Grand Pre soils (GPR)

Grand Pre soils have 20-50 cm of friable, coarse loamy, soil over friable, coarse loamy, lower soil material.

Upper soil material (Ap horizons including soil disturbed by landforming)

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 26
% silt	: 62
% clay	: 12
Coarse fragments ($\frac{1}{2}$ volume)	: 0
Bulk density (g/cm^3)	: 1.4
Hydraulic conductivity (cm/h)	: 0.2
pH (H_2O)	: 6.2
CEC (meg/100g)	: 5.9
% organic matter in Ap	: 1.6 (range: 0.6-2.6; n=2)

Lower soil material

Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 38 (range: 29-50; n=3)
% silt	: 50 (range: 41-58; n=3)
% clay	: 12 (range: 9-15; n=3)
Coarse fragments (% volume)	: 0
Bulk density (g/cm ³)	: 1.4 (range: 1.4-1.4; n=3)
Hydraulic conductivity (cm/h)	: 1.0 (range: 0.1-2.6; n=3)
pH (H ₂ O)	: 5.9 (range: 5.8-6.1; n=3)
CEC (meg/100g)	: 5.4 (range: 4.4-6.1; n=3)

Map units

GPR. Grand Pre map units occur where fine sandy alluvium has mixed with fine loamy tidal sediments.

HEBERT SOIL GROUP (HBT23, HBT53)

Soil material and landform

Soils of the Hebert group have developed on coarse loamy-gravelly over sandy-gravelly to sandy-skeletal, glaciofluvial sediments. They are rapidly to well drained and are found on level to gentle slopes.

Lower soil material	: Loose, sandy-gravelly to sandy-skeletal glaciofluvial sediments
Drainage range	: Rapid to well
Slope range	: 0-15%; dominantly 0-5%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Soils of the Hebert group cover about 3% or 3 411 ha (185 areas) of the survey area and are found near major rivers. Over 80% of the soils are found near the Bass, Portapique, Folly, Chiganois, North and Debert rivers. Small areas of Hebert soil are located along the Stewiacke River and in the Windsor area.

Profile characteristics of Hebert 23 soils (HBT23)

Hebert 23 soils are rapidly drained and have 20-50 cm of very friable, coarse loamy-gravelly soil over loose, sandy-gravelly to sandy-skeletal lower soil material. They are similar to Hebert 53 soils but have a thinner upper soil layer, and drain faster. Hebert 53 soil data can be used to estimate profile characteristic for Hebert 23 soils.

Profile characteristics of Hebert 53 soils (HBT53)

Hebert 53 soils are well drained and have 50-80 cm of very friable, coarse loamy-gravelly soil over loose, sandy-gravelly to sandy-skeletal lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Very friable
Particle size class	: Coarse loamy-gravelly
% sand	: 72 (range: 66-77; n=2)
% silt	: 13 (range: 7-19; n=2)
% clay	: 15 (range: 15-16; n=2)
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 6.3 (range: 5.4-7.3; n=2)
CEC (meg/100g)	: 1.4 (range: 0.4-2.4; n=2)
% organic matter in Ap	: 3.4 (range: 2.4-4.5; n=2)

Lower soil material

Consistence	: Loose
Particle size class	: Sandy-gravelly to sandy skeletal
% sand	: 88 (range: 87-89; n=2)
% silt	: 7 (range: 6-8; n=2)
% clay	: 5 (range: 5-6; n=2)
Coarse fragments (% volume)	: 20-50
pH (H ₂ O)	: 6.7 (range: 6.6-6.9; n=2)
CEC (meg/100g)	: 0.4 (range: 0.3-0.4; n=2)

Map units

HBT23, HBT53. Hebert 23 and 53 soils are found on all slope positions except depressions that have restricted drainage.

HBT23-HBT53. Hebert 23 and 53 soils are randomly mixed within the map unit.

HBT53-CMU53. Hebert 53 soils are found on all slope positions except depressions that have restricted drainage. Comeau 53 soils are found in imperfectly drained depressions.

HANSFORD SOIL GROUP (HFD23, HFD52, HFD53, HFD83)

Soil material and landform

Soils of the Hansford group have developed on coarse loamy over coarse loamy-gravelly till and on coarse loamy-gravelly till. They are well to moderately well drained and are found on level to strong slopes.

Lower soil material	: Coarse loamy-gravelly till
Drainage range	: Well to moderately well
Slope range	: 0-30%; dominantly 2-9%
Stoniness range	: Nonstony to moderately stony; dominantly slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 20 to greater than 80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Hansford group cover about 7% or 7 141 ha (237 areas) of the survey area. About 63% of the soils are found between Walton and the Shubenacadie River in eastern Hants County. About 30% of Hansford soils are found north of Cobequid Bay on the foothills of the Cobequid Upland.

Profile characteristics of Hansford 23 soils (HFD23)

Hansford 23 soils are moderately well drained and have 20-50 cm of friable, coarse loamy-gravelly, soil over firm, coarse loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 65
% silt	: 23
% clay	: 12
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 6.2

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy-gravelly
% sand	: 68
% silt	: 21
% clay	: 11
Coarse fragments (% volume)	: 20-35
Bulk density (g/cm ³)	: 1.7
pH (H ₂ O)	: 6.2

Profile characteristics of Hansford 52 soils (HFD52)

Hansford 52 soils are well drained and have 50-80 cm of friable, coarse loamy soil over firm, coarse loamy-gravelly lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 45 (range: 38-55; n=3)
% silt	: 43 (range: 34-52; n=3)
% clay	: 12 (range: 10-13; n=3)
Coarse fragments (% volume)	: Less than 20
Bulk density (g/cm ³)	: 1.5
Hydraulic conductivity (cm/h)	: 2.1
pH (H ₂ O)	: 5.5 (range: 5.2-5.7; n=3)
CEC (meg/100g)	: 1.9
% organic matter	: 1.8
% organic matter in Ap	: 2.9

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy-gravelly
% sand	: 60
% silt	: 30
% clay	: 10
Coarse fragments (% volume)	: 20-35
Bulk density (g/cm ³)	: 1.9
Hydraulic conductivity (cm/h)	: 0.4
pH (H ₂ O)	: 5.3
CEC (meg/100g)	: 2.4

Profile characteristics of Hansford 53 soils (HFD53)

Hansford 53 soils are well drained and have 50-80 cm of friable, coarse loamy-gravelly, soil over firm, coarse loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy-gravelly
% sand	: 48 (range: 47-49; n=2)
% silt	: 37 (range: 37-38; n=2)
% clay	: 15 (range: 14-16; n=2)
Coarse fragments (% volume)	: 20-35
Bulk density (g/cm ³)	: 1.1 (range: 1.1-1.1; n=2)
Hydraulic conductivity (cm/h)	: 13.7 (range: 11.1-16.2; n=2)
pH (H ₂ O)	: 5.9 (range: 5.2-6.2; n=2)
CEC (meg/100g)	: 0.7 (range: 0.6-0.8; n=2)
% organic matter in Ap	: 2.6 (range: 2.5-2.6; n=2)

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy-gravelly
% sand	: 45
% silt	: 38
% clay	: 17
Coarse fragments (% volume)	: 20-35
Bulk density (g/cm ³)	: 1.8
Hydraulic conductivity (cm/h)	: 0.3
pH (H ₂ O)	: 6.1
CEC (meg/100g)	: 7.6

Profile characteristics of Hansford 83 soils (HFD83)

Hansford 83 soils are well drained and have greater than 80 cm of friable, coarse loamy-gravelly, soil over firm, coarse loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: Greater than 80 cm
Consistence	: Friable
Particle size class	: Coarse loamy-gravelly
% sand	: 60 (range: 54-65; n=2)
% silt	: 27 (range: 26-28; n=2)
% clay	: 13 (range: 9-18; n=2)
Coarse fragments (% volume)	: 20-35
Bulk density (g/cm ³)	: 1.4 (range: 1.2-1.5; n=2)
Hydraulic conductivity (cm/h)	: 9.3 (range: 5.8-12.9; n=2)
pH (H ₂ O)	: 5.1 (range: 4.9-5.4; n=2)
CEC (meg/100g)	: 0.6
% organic matter	: 2.6
% organic matter in Ap	: 5.0

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy-gravelly
% sand	: 60 (range: 57-64; n=2)
% silt	: 28 (range: 21-35; n=2)
% clay	: 12 (range: 7-15; n=2)
Coarse fragments (% volume)	: 20-35
Bulk density (g/cm ³)	: 1.5 (range: 1.3-1.6; n=2)
Hydraulic conductivity (cm/h)	: 5.7 (range: 1.2-10.3; n=2)
pH (H ₂ O)	: 5.3 (range: 5.1-5.6; n=2)
CEC (meg/100g)	: 0.6

Map units

HFD23; HFD53; HFD83. Hansford map units are located on knolls and mid to upper slopes that have good surface drainage.

HFD23-SGL23; HFD52-SGL52; HFD53-SGL53; HFD83-SGL83. Hansford soils are found on knolls and upper slopes. Springhill soils are found on mid to lower slopes and receive seepage and runoff.

HFD23-SHN23; HFD52-SHN23. South Alton 23 soils are found on the upper slopes and knolls where bedrock is within 50 cm of the surface. The Hansford soils are found on well drained mid to lower slopes where bedrock is deeper than 80 cm.

HFD53-PGW52. Hansford 53 and Pugwash 52 soils are randomly mixed in the unit. Frequently the soils are hard to separate because the gravel content of the lower soil material of both soils is close to 20%.

HANTSPORT SOIL GROUP (HTP22, HTP23, HTP52, HTP53)

Soil material and landform

Soils of the Hantsport group have developed on coarse loamy over fine loamy-gravelly till and on coarse loamy-gravelly over fine loamy-gravelly till. They are imperfectly drained and are found on level to strong slopes.

Lower soil material	: Fine loamy-gravelly till
Drainage	: Imperfect
Slope range	: 0-30%; dominantly 2-9%
Stoniness range	: Nonstony to moderately stony; dominantly slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 20-80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Hantsport group cover about 5% or 5 627 ha (203 areas) of the survey area. The soils are found along the northern boundary of the survey area in Colchester County and in Hants County.

Profile characteristics of Hantsport 22 soils (HTP22)

Hantsport 22 soils have 20-50 cm of friable, coarse loamy soil over firm, fine loamy-gravelly lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 45 (range: 34-57; n=4)
% silt	: 42 (range: 28-55; n=4)
% clay	: 13 (range: 11-17; n=4)
Coarse fragments (% volume)	: Less than 20
Bulk density (g/cm ³)	: 1.6 (range: 1.5-1.7; n=2)
Hydraulic conductivity (cm/h)	: 3.5
pH (H ₂ O)	: 5.7 (range: 5.3-6.8; n=4)
CEC (meg/100g)	: 3.3 (range: 2.3-4.4; n=2)
% organic matter	: 0.7 (range: 0.4-1.0; n=2)

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy-gravelly
% sand	: 40 (range: 28-46; n=4)
% silt	: 39 (range: 35-45; n=4)
% clay	: 21 (range: 18-27; n=4)
Coarse fragments ($\frac{1}{2}$ volume)	: 20-35
Bulk density (g/cm^3)	: 1.8 (range: 1.7-1.8; n=2)
Hydraulic conductivity (cm/h)	: 1.7 (range: 0.9-2.6 n=2)
pH (H_2O)	: 5.5 (range: 5.4-5.7; n=3)
CEC (meg/100g)	: 4.3 (range: 3.5-5.1; n=2)

Profile characteristics of Hantsport 23 soils (HTP23)

Hantsport 23 soils have 20-50 cm of friable, coarse loamy-gravelly, soil over firm, fine loamy-gravelly, lower soil material. They are similar to Hantsport 22 soils but have more gravel in the upper soil material. Hantsport 22 soil data can be used to estimate the profile characteristics for Hantsport 23 soils.

Profile characteristics of Hantsport 52 soils (HTP52)

Hantsport soils have 50-80 cm of friable, coarse loamy soil over firm, fine loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 39
% silt	: 45
% clay	: 16
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.4
Hydraulic conductivity (cm/h)	: 6.0
pH (H_2O)	: 5.9
CEC (meg/100g)	: 1.7
% organic matter	: 0.9
% organic matter in Ap	: 6.5

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy-gravelly
% sand	: 38
% silt	: 40
% clay	: 22
Coarse fragments (% volume)	: 20-35
Bulk density (g/cm ³)	: 1.6
Hydraulic conductivity (cm/h)	: 3.5
pH (H ₂ O)	: 5.3
CEC (meg/100g)	: 3.0

Profile characteristics of Hantsport 53 soils (HTP53)

Hantsport 53 soils have 50-80 cm of friable, coarse loamy-gravelly soil over firm, fine loamy-gravelly, lower soil material. They are similar to Hantsport 52 soils but have more gravel in the upper soil material. Hantsport 52 data can be used to estimate the profile characteristics for Hantsport 53 soils.

Map units

HTP22; HTP23; HTP52; HTP53. Hantsport soils are located on upper slopes that have restricted surface drainage and on mid to lower slopes that receive runoff and seepage.

HTP23-WOB53. Hantsport 23 soils are located on mid to lower slopes. Woodbourne 53 soils are found on the upper slopes and knolls that have good surface drainage.

HTP22-MHO22; HTP23-MHO23; HTP53-MHO53. Hantsport soils are located on mid to upper slopes that have adequate surface drainage. Mahone soils are found in poorly drained depressions that collect runoff and seepage. They are also found on flat, impermeable, segments of the map unit where runoff is very slow and excess water ponds on the soil surface. Mahone soils have water tables at or near the surface and remain saturated for extended periods throughout the growing season.

HTP53-DRT82. Hantsport 53 and Debert 82 soils are randomly mixed in the map unit.

HTP52-SGL52. Hantsport 52 and Springhill 52 soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the clay content of the lower soil material of both soils is close to 18%.

HTP53-QUE52. Hantsport 53 and Queens 52 soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the gravel content of both soils is close to 20%.

HTP22-VRN52. Hantsport 22 soils and Vernon Mines 52 soils are randomly mixed in the map unit.

HTP22-SHN53. South Alton 53 soils are found on the upper slopes and knolls where bedrock is within 80 cm of the surface. The Hantsport 22 soils are found on the mid to lower slopes where bedrock is deeper than 80 cm.

KINGSVILLE SOIL GROUP (KSV20, KSV22, KSV52)

Soil material and landform

Soils of the Kingsville group have developed on fine loamy till and coarse loamy over fine loamy till. They are poorly drained and are found on level to gentle slopes.

Lower soil material	: Fine loamy till
Drainage	: Poor
Slope range	: 0-9%; dominantly 0-5%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 20-80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Kingsville group cover about 5% or 5 169 ha (184 areas) of the survey area. Over 85% (4 550 ha) of Kingsville soils are found on large, flat sections of till plain in Hants County.

Profile characteristics of Kingsville 20 soils (KSV20)

Kingsville 20 soils have 20-50 cm of friable, fine loamy, soil over firm, fine loamy, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Fine loamy
% sand	: 31
% silt	: 39
% clay	: 30
Coarse fragments (% volume)	: Less than 20
pH (H ₂ O)	: 4.8
CEC (meg/100g)	: 5.2
% organic matter	: 0.4
% organic matter in Ap	: 4.1

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy
% sand	: 29
% silt	: 41
% clay	: 30
Coarse fragments (% volume)	: Less than 20
pH (H ₂ O)	: 5.4
CEC (meg/100g)	: 7.4

Profile characteristics of Kingsville 22 soils (KSV22)

Kingsville 22 soils have 20-50 cm of friable, coarse loamy, soil over firm, fine loamy, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 63
% silt	: 22
% clay	: 15
Coarse fragments (% volume)	: Less than 20
pH (H ₂ O)	: 5.3

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy
% sand	: 30 (range: 28-32; n=2)
% silt	: 41 (range: 37-45; n=2)
% clay	: 29 (range: 26-33; n=2)
Coarse fragments (% volume)	: Less than 20
pH (H ₂ O)	: 6.3 (range: 5.2-7.1; n=2)

Profile characteristics of Kingsville 52 soils (KSV52)

Kingsville 52 soils have 50-80 cm of friable, coarse loamy, soil over firm, fine loamy, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 42
% silt	: 42
% clay	: 16
Coarse fragments (% volume)	: Less than 20
pH (H ₂ O)	: 6.6

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy
% sand	: 36
% silt	: 46
% clay	: 18
Coarse fragments (% volume)	: Less than 20
pH (H ₂ O)	: 6.8

Map units

KSV20; KSV22; KSV52. Map units are found in poorly drained depressions that collect runoff and seepage from the surrounding uplands. Kingsville map units are also found on flat impermeable areas where runoff is very slow and excess water ponds on the soil surface. Kingsville map units have water tables at or near the surface and remain saturated for extended periods throughout the growing season.

KSV22-QUE22. Kingsville 22 soils are found in poorly drained depressions and flat areas, and on the lower slopes. Queens 22 soils are located on mid to upper slopes.

KSV22-DFN5P. Dufferin 5P soils are located in very poorly drained depressions in the map unit.

LAWRENCETOWN 80 SOILS (LWR80)

Soil material and landform

Lawrencetown 80 soils have developed on fine loamy, lacustrine sediments. They are poorly drained and are found on level to nearly level slopes.

Soil material	: Fine loamy (includes fine silty) lacustrine sediments
Drainage range	: Poor to very poor; dominantly poor
Slope range	: 0-2%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Lawrencetown 80 soils cover less than 1% or 684 ha (44 areas) of the survey area. They are found in small pockets throughout the survey area but are most common in the Kennetcook area of Hants County and along the Stewiacke River in Colchester County.

Profile characteristics of Lawrencetown 80 soils (LWR80)

Lawrencetown 80 soils have greater than 80 cm of friable to firm, fine loamy, soil material.

Upper soil material (includes Ap, Ah and Bg horizons)

Thickness range	: 20-30 cm
Consistence range	: Friable to firm
Particle size class	: Fine loamy
% sand	: 16 (range: 2-28; n=2)
% silt	: 57 (range: 57-58; n=2)
% clay	: 27 (range: 15-39; n=2)
Coarse fragments (% volume)	: 0
Bulk density (g/cm ³)	: 1.5 (range: 1.4-1.6; n=2)
Hydraulic conductivity (cm/h)	: 3.0 (range: 0.2-5.8; n=2)
pH (H ₂ O)	: 5.3 (range: 5.0-5.7; n=2)
CEC (meg/100g)	: 7.3 (range: 4.2-10.4; n=2)
% organic matter in Bg	: 0.6 (range: 0.6-0.7; n=2)
% organic matter in Ap	: 5.6 (range: 4.4-6.9; n=2)

Lower soil material

Consistence	: Firm to firm
Particle size class	: Fine loamy
% sand	: 16 (range: 10-31; n=2)
% silt	: 57 (range: 49-57; n=2)
% clay	: 27 (range: 20-33; n=2)
Coarse fragments (% volume)	: 0
Bulk density (g/cm ³)	: 1.6 (range: 1.6-1.7; n=2)
Hydraulic conductivity (cm/h)	: 3.5 (range: 1.5-5.4; n=2)
pH (H ₂ O)	: 5.1 (range: 4.7-5.5; n=2)
CEC (meg/100g)	: 6.8 (range: 5.2-8.3; n=2)

Map units

LWR80. Map units are found in poorly drained depressions that collect runoff and seepage from the surrounding uplands. The map units are also found on flat impermeable areas where runoff is very slow and excess water ponds on the soil surface. Lawrencetown 80 map units have water tables at or near the surface and remain saturated for extended periods throughout the growing season.

LWR80-MSW22. Lawrencetown 80 soils and Masstown 22 soils are randomly mixed in the map unit.

METEGHAN 53 SOILS (MGA53)

Soil material and landform

Meteghan 53 soils have developed on coarse loamy-gravelly over sandy-gravelly to sandy-skeletal glaciofluvial sediments. They are poorly drained and are found on level to very gentle slopes.

Lower soil material	: Sandy-gravelly to sandy-skeletal glaciofluvial sediments.
Drainage range	: Poor to very poor; dominantly poor
Slope range	: 0-5%; dominantly 0-2%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Meteghan 53 soils cover less than 1% or 229 ha (23 areas) of the survey area and are found adjacent to the north shore of Cobequid Bay.

Profile characteristics of Meteghan 53 soils (MGA53)

Meteghan 53 soils have 50-80 cm of very friable to friable, coarse loamy-gravelly, soil over loose, sandy-gravelly to sandy-skeletal, lower soil material.

Map units

MGA53. Map units are found in poorly drained depressions on glaciofluvial outwash plains adjacent to Cobequid Bay. Meteghan 53 map units are frequently underlain by impermeable marine sediments that hold the water table at or near the soil surface for extended periods during the growing season.

MAHONE SOIL GROUP (MHO22, MHO23, MHO52, MHO53)

Soil material and landform

Soils of the Mahone group have developed on coarse loamy over fine loamy-gravelly, till and on coarse loamy-gravelly over fine loamy-gravelly, till. They are poorly drained and are found on level to gentle slopes.

Lower soil material	: Fine loamy-gravelly till
Drainage	: Poor
Slope range	: 0-9%; dominantly 0-5%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 20-80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Mahone group cover about 1% or 1 163 ha (42 areas) of the survey area. Over 80% are found in Hants County. Smaller areas are located near the northern boundary of the survey area between Bass River and Truro.

Profile characteristics of Mahone 22 soils (MHO22)

Mahone 22 soils have 20-50 cm of friable, coarse loamy soil over firm, fine loamy-gravelly lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 35 (range: 33-36; n=2)
% silt	: 49 (range: 48-49; n=2)
% clay	: 16 (range: 15-18; n=2)
Coarse fragments (% volume)	: Less than 20
pH (H ₂ O)	: 4.9 (range: 4.8-5.0; n=2)

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy-gravelly
% sand	: 25
% silt	: 45
% clay	: 30
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 5.2

Profile characteristics of Mahone 23 soils (MHO23)

Mahone 23 soils have 20-50 cm of friable, coarse loamy-gravelly, soil over firm, fine loamy-gravelly lower soil material. They are similar to Mahone 22 soils but have more gravel in the upper soil material. Mahone 22 data can be used as an estimate of profile characteristic for Mahone 23 soils.

Profile characteristics of Mahone 52 soils (MHO52)

Mahone 52 soils have 50-80 cm of friable, coarse loamy, soil over firm, fine loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 52
% silt	: 35
% clay	: 13
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk Density (g/cm^3)	: 1.6
Hydraulic conductivity (cm/h)	: 2.9
pH (H_2O)	: 4.9 (range: 4.8-5.0; n=2)
CEC (meg/100g)	: 1.7
% organic matter	: 1.5
% organic matter in Ap	: 7.2

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy-gravelly
% sand	: 21
% silt	: 45
% clay	: 34
Coarse fragments ($\frac{1}{2}$ volume)	: 20-35
Bulk Density (g/cm^3)	: 1.8
Hydraulic conductivity (cm/h)	: 1.1
pH (H_2O)	: 5.3

Profile characteristics of Mahone 53 soils (MHO53)

Mahone 53 soils have 50-80 cm of friable, coarse loamy-gravelly, soil over firm, fine loamy-gravelly lower soil material. They are similar to Mahone 52 soils but have more gravel in the upper soil material. Mahone 52 soil data can be used to estimate the profile characteristic for Mahone 53 soils.

Map units

MHO22; MHO23; MHO52; MHO53. Mahone map units are found in poorly drained depressions that collect runoff and seepage from the surrounding uplands. Map units are also found on flat impermeable areas where runoff is very slow and excess water ponds on the soil surface. Mahone map units have water tables at or near the surface and remain saturated for extended periods throughout the growing season.

MHO23-HTP23; MHO23-HTP53. Mahone 23 soils are found in poorly drained depressions and flat areas, and on lower slopes. Hantsport 23 and 53 soils are located on mid to upper slopes.

MHO23-HFD23. Mahone 23 soils are found in poorly drained depressions and flat areas, and on lower slopes. Hansford 23 soils are located on mid to upper slopes.

MASSTOWN SOIL GROUP (MSW22, MSW52, MSW82)

Soil material and landform

Soils of the Masstown group have developed on coarse loamy till. They are poorly drained and are found on level to gentle slopes.

Lower soil material	: Coarse loamy till
Drainage	: Poor
Slope range	: 0-9%; dominantly 0-5%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 20 to greater than 80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Masstown group cover about 4% or 4 145 ha (222 areas) of the survey area. Over 50% of the soils are found in Hants County. Significant areas of Masstown soil are located north of Cobequid Bay.

Profile characteristics of Masstown 22 soils (MSW22)

Masstown 22 soils have 20-50 cm of friable, coarse loamy, soil over firm, coarse loamy, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 56 (range: 46-65; n=2)
% silt	: 31 (range: 26-37; n=2)
% clay	: 13 (range: 9-16; n=2)
Coarse fragment (% volume)	: Less than 20%
pH (H ₂ O)	: 6.5 (range: 6.1-6.9; n=2)
CEC (meg/100g)	: 4.0 (range: 2.2-5.9; n=2)
% organic matter	: 0.5 (range: 0.2-0.8; n=2)
% organic matter in Ap	: 5.2

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy
% sand	: 59 (range: 55-63; n=4)
% silt	: 28 (range: 25-32; n=4)
% clay	: 13 (range: 12-14; n=4)
Coarse fragment (% volume)	: Less than 20%
pH (H ₂ O)	: 6.4 (range: 5.9-7.3; n=4)
CEC (meg/100g)	: 6.4 (range: 4.4-8.5; n=4)

Profile characteristics of Masstown 52 soils (MSW52)

Masstown 52 soils have 50-80 cm of friable, coarse loamy, soil over firm, coarse loamy, lower soil material. They are similar to Masstown 22 soils but have deeper upper soil material. Masstown 22 data can be used to estimate the profile characteristics of Masstown 52 soils.

Profile characteristics of Masstown 82 soils (MSW82)

Masstown 82 soils have greater than 80 cm of friable, coarse loamy, soil over firm, coarse loamy, lower soil material.

Upper soil material

Thickness range	: Greater than 80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 41
% silt	: 45
% clay	: 14
Coarse fragment (% volume)	: Less than 20%
pH (H ₂ O)	: 5.4
CEC (meg/100g)	: 7.5

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy
% sand	: 63
% silt	: 26
% clay	: 11
Coarse fragment (% volume)	: Less than 20%
pH (H ₂ O)	: 6.0
CEC (meg/100g)	: 7.0

Map units

MSW22; MSW52; MSW82. Masstown map units are found in poorly drained depressions that collect runoff and seepage from the surrounding uplands. They are also found on flat impermeable areas where runoff is very slow and excess water ponds on the soil surface. Masstown map units have water tables at or near the surface and remain saturated for extended periods throughout the growing season.

MSW52-QUE22. Masstown 52 soils are found in poorly drained depressions and flat areas, and on lower slopes. Queens 22 soils are located on the mid to upper slopes.

MSW-DFN5P. Dufferin 5P soils are located in very poorly drained depressions in the map unit.

MSW52-DRT52. Masstown 52 soils are found in poorly drained depressions, on flat areas, and on lower slopes. Debert 52 soils are located on the mid to upper slopes.

MSW82-OSW52. Masstown 82 soils are found in poorly drained depressions, on flat areas, and on lower slopes. Onslow 52 soils are located on the mid to upper slopes.

ONSHOW 52 SOILS (OSW52)

Soil material and landform

Onslow 52 soils have developed on coarse loamy over fine sandy, glaciofluvial sediments. They are imperfectly drained and are found on level to moderate slopes.

Lower soil material	: Fine sandy glaciofluvial sediments
Drainage	: Imperfect
Slope range	: 0-15%; dominantly 2-5%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Onslow 52 soils cover less than 1% or 602 ha (49 areas) of the survey area. Over 90% of the Onslow soils are found north of Cobequid Bay in Colchester County.

Profile characteristics of Onslow 52 soils (OSW52)

Onslow 52 soils have 50-80 cm of friable, coarse loamy, soil over loose, fine sandy, lower soil material. They are similar to Truro 52 soils but are not as well drained. Truro 52 soil data can be used to estimate the profile characteristics of Onslow 52 soils.

Map units

OSW52. Onslow 52 soils are found on lower slopes and in imperfectly drained depressions that receive seepage and runoff.

OSW52-TUO52. Onslow 52 soils are found on lower slopes and in imperfectly drained depressions that receive seepage and runoff. Truro 52 soils are located on the mid to upper slopes.

PUGWASH SOIL GROUP (PGW22, PGW52, PGW82)

Soil material and landform

Soils of the Pugwash group have developed on coarse loamy till. They are well to moderately well drained and are found on level to strong slopes.

Lower soil material	: Coarse loamy till
Drainage range	: Well to moderately well
Slope range	: 0-30%; dominantly 2-9%
Stoniness range	: Nonstony to moderately stony; dominantly nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: 20-80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Pugwash group cover about 8% or 8 637 ha (359 areas) of the survey area. About 50% (4 208 ha) of Pugwash soils are found north of Cobequid Bay. Other significant areas of Pugwash soil are found in eastern Hants County (2 520 ha), south of Cobequid Bay in Colchester County (1 557 ha), and in the Windsor area (352 ha).

Profile characteristics of Pugwash 22 soils (PGW22)

Pugwash 22 soils are moderately well drained and have 20-50 cm of friable, coarse loamy, soil over firm, coarse loamy, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 69 (range: 61-73; n=4)
% silt	: 22 (range: 16-29; n=4)
% clay	: 9 (range: 8-10; n=4)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.3 (range: 0.9-1.4; n=3)
Hydraulic conductivity (cm/h)	: 13.7 (range: 6.2-25.3; n=3)
pH (H_2O)	: 5.1 (range: 4.4-5.8; n=4)
CEC (meg/100g)	: 1.2 (range: 0.7-1.8; n=4)
% organic matter	: 1.1 (range: 0.4-2.6; n=4)

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy
% sand	: 62 (range: 49-69; n=4)
% silt	: 29 (range: 22-38; n=4)
% clay	: 9 (range: 5-13; n=4)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.6 (range: 1.6-1.7; n=2)
Hydraulic conductivity (cm/h)	: 3.5 (range: 2.7-4.3; n=2)
pH (H_2O)	: 5.5 (range: 4.7-6.4; n=3)
CEC (meg/100g)	: 3.9 (range: 1.2-5.6; n=3)

Profile characteristics of Pugwash 52 soils (PGW52)

Pugwash 52 soils are well drained and have 50-80 cm of friable, coarse loamy, soil over firm, coarse loamy, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 57 (range: 44-67; n=9)
% silt	: 29 (range: 22-39; n=9)
% clay	: 14 (range: 12-17; n=9)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.5 (range: 1.2-1.7; n=6)
Hydraulic conductivity (cm/h)	: 4.7 (range: 0.2-18.0; n=7)
pH (H_2O)	: 5.8 (range: 5.0-6.5; n=8)
CEC (meg/100g)	: 2.1 (range: 0.9-3.6; n=5)
% organic matter	: 1.0 (range: 0.3-1.9; n=5)
% organic matter in Ap	: 4.1 (range: 3.1-4.5; n=5)

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy
% sand	: 63 (range: 40-70; n=6)
% silt	: 24 (range: 13-42; n=6)
% clay	: 13 (range: 11-17; n=6)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.6 (range: 1.5-1.8; n=4)
Hydraulic conductivity (cm/h)	: 2.2 (range: 0.2-5.7; n=5)
pH (H_2O)	: 5.8 (range: 5.1-6.5; n=9)
CEC (meg/100g)	: 2.0 (range: 0.6-3.2; n=5)

Profile characteristics of Pugwash 82 soils (PGW82)

Pugwash 82 soils are well drained and have greater than 80 cm of friable, coarse loamy, soil over firm, coarse loamy, lower soil material.

Upper soil material

Thickness range	: Greater than 80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 65 (range: 55-78; n=15)
% silt	: 23 (range: 13-34; n=15)
% clay	: 12 (range: 8-17; n=15)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.5 (range: 1.0-1.7; n=6)
Hydraulic conductivity (cm/h)	: 8.0 (range: 0.7-16.7; n=7)
pH (H_2O)	: 5.8 (range: 4.7-6.4; n=15)
CEC (meg/100g)	: 2.3 (range: 1.0-3.7; n=15)
% organic matter	: 1.7 (range: 0.3-4.2; n=15)
% organic matter in Ap	: 3.3 (range: 1.2-5.4; n=13)

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy
% sand	: 67 (range: 53-84; n=2)
% silt	: 22 (range: 11-33; n=2)
% clay	: 11 (range: 8-16; n=2)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.5 (range: 1.1-1.7; n=7)
Hydraulic conductivity (cm/h)	: 3.3 (range: 1.3-10.2; n=7)
pH (H_2O)	: 5.9 (range: 4.8-7.0; n=14)
CEC (meg/100g)	: 2.5 (range: 0.5-5.8; n=14)

Map units

PGW22; PGW52; PGW82. Pugwash map units are located on all slopes positions except depressions that have restricted drainage.

PGW52-QUE22. Queens 22 soils are located on mid to lower slopes. Pugwash 52 soils are found on knolls and upper slopes.

PGW52-TUO52; PGW82-TUO52. Truro 52 and Pugwash soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the particle size of the lower soil material of both soils is close to the coarse loamy-fine sandy border.

PGW52-DRT22; PGW52-DRT52; PGW82-DRT52; PGW82-DRT82. Debert soils are located on mid to lower slopes that receive runoff and seepage. Pugwash soils are found on the upper slopes and knolls that have good surface drainage.

PGW52-HFD53. Pugwash and Hansford soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the gravel content of the lower soil material of both soils is close to 20%.

QUEENS SOIL GROUP (QUE20, QUE22, QUE52)

Soil material and landform

Soils of the Queens group have developed on coarse loamy over fine loamy till and on fine loamy till. They are imperfectly drained and are found on level to strong slopes.

Lower soil material	: Fine loamy till
Drainage	: Imperfect
Slope range	: 0-30%; dominantly 2-9%
Stoniness range	: Nonstony to moderately stony; dominantly nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: 20-80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Queens group cover about 17% or 17 445 ha (661 areas) of the survey area. About 75% of the Queens soils are found in Hants County. Significant areas are located between Old Barns and Stewiacke (4 606 ha). Smaller areas are found between Bass River and Truro (770 ha).

Profile characteristics of Queens 20 soils (QUE20)

Queens 20 soils have 20-50 cm of friable, fine loamy, soil over firm, fine loamy, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Fine loamy
% sand	: 41 (range: 20-53; n=4)
% silt	: 37 (range: 28-54; n=4)
% clay	: 22 (range: 18-34; n=4)
Coarse fragments (% volume)	: Less than 20
Bulk density (g/cm ³)	: 1.5 (range: 1.3-1.7; n=10)
Hydraulic conductivity (cm/h)	: 4.0 (range: 0.9-6.7; n=10)
pH (H ₂ O)	: 5.8 (range: 4.9-6.8; n=21)
CEC (meg/100g)	: 5.1 (range: 2.0-7.2; n=14)
% organic matter	: 1.6 (range: 0.3-5.5; n=14)
% organic matter in Ap	: 4.1 (range: 1.9-7.6; n=10)

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy
% sand	: 35 (range: 14-15; n=4)
% silt	: 37 (range: 24-56; n=4)
% clay	: 28 (range: 18-40; n=4)
Coarse fragments (% volume)	: Less than 20
Bulk density (g/cm ³)	: 1.7 (range: 1.6-1.9; n=9)
Hydraulic conductivity (cm/h)	: 2.4 (range: 0.6-5.4; n=7)
pH (H ₂ O)	: 5.9 (range: 5.0-7.4; n=30)
CEC (meg/100g)	: 7.3 (range: 1.8-14; n=21)

Profile characteristics of Queens 22 soils (QUE22)

Queens 22 soils have 20-50 cm of friable, coarse loamy, soil over firm, fine loamy, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 55 (range: 45-65; n=9)
% silt	: 33 (range: 23-48; n=9)
% clay	: 12 (range: 9-16; n=9)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.5 (range: 1.4-1.6; n=3)
Hydraulic conductivity (cm/h)	: 2.6 (range: 0.4-3.9; n=3)
pH (H_2O)	: 5.5 (range: 4.8-6.2; n=7)
CEC (meg/100g)	: 2.3 (range: 0.9-4.1; n=5)
% organic matter	: 0.8 (range: 0.3-1.0; n=5)
% organic matter in Ap	: 3.4 (range: 1.2-5.3; n=5)

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy
% sand	: 44 (range: 33-57; n=6)
% silt	: 29 (range: 21-36; n=6)
% clay	: 27 (range: 19-34; n=6)
Coarse fragments ($\frac{1}{2}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.6 (range: 1.6-1.9; n=2)
Hydraulic conductivity (cm/h)	: 0.5 (range: 0.1-1.0; n=2)
pH (H_2O)	: 6.0 (range: 5.3-6.3; n=9)
CEC (meg/100g)	: 5.9 (range: 2.8-8.1; n=6)

Profile characteristics of Queens 52 soils (QUE52)

Queens 52 soils have 50-80 cm of friable, coarse loamy, soil over firm, fine loamy, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 45 (range: 32-62; n=2)
% silt	: 41 (range: 23-55; n=2)
% clay	: 14 (range: 10-16; n=2)
Coarse fragments ($\frac{1}{8}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.5 (range: 1.1-1.8; n=3)
Hydraulic conductivity (cm/h)	: 4.2 (range: 0.2-11.4; n=3)
pH (H_2O)	: 5.6 (range: 4.7-6.4; n=7)
CEC (meg/100g)	: 3.6 (range: 1.8-5.7; n=3)
% organic matter	: 1.2 (range: 0.5-2.3; n=3)
% organic matter in Ap	: 4.8 (range: 4.7-4.9; n=2)

Lower soil material

Consistence	: Firm
Particle size class	: Fine loamy
% sand	: 38 (range: 21-44; n=2)
% silt	: 34 (range: 26-41; n=2)
% clay	: 28 (range: 23-37; n=2)
Coarse fragments ($\frac{1}{8}$ volume)	: Less than 20
Bulk density (g/cm^3)	: 1.7 (range: 1.5-1.8; n=4)
Hydraulic conductivity (cm/h)	: 1.8 (range: 0.3-4.2; n=4)
pH (H_2O)	: 5.9 (range: 4.8-6.6; n=4)
CEC (meg/100g)	: 7.0 (range: 6.1-8.4; n=3)

Map units

QUE20; QUE22; QUE52. Queens map units are located on upper slopes that have restricted surface drainage. The units are also found on mid and lower slopes that receive seepage and runoff.

QUE22-QUE52. Queens 22 and Queens 52 soils are randomly mixed in the map unit.

QUE22-DRT22; QUE22-DRT52; QUE52-DRT52. Queens and Debert soils are randomly mixed in the map unit. Frequently the soils are hard to separate because the clay content of the lower soil material of both soils is close to 18%.

QUE22-FUH52. Queens 22 soils are located on mid to lower slopes. Falmouth 52 soils are found on the upper slopes and knolls that have good surface drainage.

QUE22-KSV22. Queens 22 soils are located on the mid to upper slopes that have adequate surface drainage. Kingsville 22 soils are found in poorly drained depressions that collect runoff and seepage. They are also found on flat, impermeable, segments of the map unit where runoff is very slow and excess water ponds on the soil surface. Kingsville 22 soils have water tables at or near the surface and remain saturated for extended periods throughout the growing season.

QUE52-VRN53. Queens 52 soils and Vernon Mines 53 soils are randomly mixed in the map unit.

ROSSIGNOL 8P SOILS (RG08P)

Soil material and landform

Rossignol 8P soils have developed on fibric to mesic peat. They are very poorly drained organic soils and are found on level to nearly level fens.

Lower soil material	: Greater than 80 cm of fibric to mesic peat
Drainage	: Very poor
Slope range	: 0-2%
Stoniness range	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Rossignol 8P soils cover less than 1% or 735 ha (35 areas) of the survey area. Over 65% of the soils are found between Bramber and Windsor. Other areas of Rossignol soils are located in eastern Hants County, between Bass River and Truro, and between Old Barns and Stewiacke.

Profile characteristics of Rossignol 8P soils (RG08P)

Rossignol 8P soils have over 80 cm of organic soil over mineral soil material. Surface layers of poorly decomposed sedge peat overlie layers of moderately decomposed sedge peat.

Map units

RG08P. Rossignol 8P map units are found in very poorly drained depressions and level areas that collect runoff and seepage from the surrounding uplands. The units are usually associated with meandering streams and have water tables at or above the surface for most of the year.

SPRINGHILL SOIL GROUP (SGL23, SGL52, SGL53, SGL83)

Soil material and landform

Soils of the Springhill group have developed on coarse loamy over coarse loamy-gravelly till and on coarse loamy-gravelly till. They are imperfectly drained and are found on level to strong slopes.

Lower soil material	: Coarse loamy-gravelly till
Drainage	: Imperfect
Slope range	: 0-30%; dominantly 2-9%
Stoniness range	: Nonstony to moderately stony; dominantly slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 20 to greater than 80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Springhill group cover about 5% or 5 345 ha (207 areas) of the survey area. Over 65% of Springhill soils are found between Walton and Maitland. Other significant areas are located between Bass River and Truro, between Bramber and Windsor and between Old Barns and Stewiacke.

Profile characteristics of Springhill 23 soils (SGL23)

Springhill 23 soils have 20-50 cm of friable, coarse loamy-gravelly, soil over firm, coarse loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: 20-50 cm
Consistence	: Friable
Particle size class	: Coarse loamy-gravelly
% sand	: 48 (range: 41-55; n= 2)
% silt	: 40 (range: 38-43; n= 2)
% clay	: 12 (range: 8-16; n= 2)
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 5.3 (range: 5.1-5.6; n= 2)
CEC (meg/100g)	: 2.9 (range: 2.3-3.1; n= 2)
% organic matter	: 1.8 (range: 1.0-2.7; n= 2)
% organic matter in Ap	: 2.7 (range: 2.3-3.1; n= 2)

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy-gravelly
% sand	: 58 (range: 56-61; n= 2)
% silt	: 29 (range: 25-33; n= 2)
% clay	: 13 (range: 11-14; n= 2)
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 5.5 (range: 5.4-5.7; n= 2)
CEC (meg/100g)	: 2.6 (range: 1.1-4.2; n= 2)

Profile characteristics of Springhill 52 soils (SGL52)

Springhill 52 soils have 50-80 cm of friable, coarse loamy, soil over firm, coarse loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 53
% silt	: 37
% clay	: 10
Coarse fragments (% volume)	: Less than 20
pH (H ₂ O)	: 5.5

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy-gravelly
% sand	: 56
% silt	: 27
% clay	: 17
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 5.3

Profile characteristics of Springhill 53 soils (SGL53)

Springhill 53 soils have 50-80 cm of friable, coarse loamy-gravelly, soil over firm, coarse loamy-gravelly, lower soil material. They are similar to Springhill 23 soils but have thicker upper soil material. Springhill 23 soils data can be used to estimate profile characteristic for Springhill 53 soils.

Profile characteristics of Springhill 83 soils (SGL83)

Springhill 83 soils have greater than 80 cm of friable, coarse loamy-gravelly, material over firm, coarse loamy-gravelly, lower soil material.

Upper soil material

Thickness range	: Greater than 80 cm
Consistence	: Friable
Particle size class	: Coarse loamy-gravelly
% sand	: 49
% silt	: 37
% clay	: 14
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 5.0
CEC (meg/100g)	: 1.5
% organic matter	: 1.4
% organic matter in Ap	: 5.6

Lower soil material

Consistence	: Firm
Particle size class	: Coarse loamy-gravelly
% sand	: 56
% silt	: 34
% clay	: 10
Coarse fragments (% volume)	: 20-35
pH (H ₂ O)	: 5.3
CEC (meg/100g)	: 0.6

Map units

SGL23; SGL52; SGL53; SGL83. Springhill soils are located on upper slopes that have restricted surface drainage and on mid to lower slope that receive runoff and seepage.

SGL23-VRN53; SGL23-VRN23; SGL53-VRN23; SGL23-VRN53. Map units are found in areas of shallow till overlying hard Horton bedrock. Vernon Mines soils are found when the bedrock is within 80 cm of the surface. Springhill soils are found when the bedrock is deeper than 80 cm.

SGL23-ECY23; SGL52-ECY52; SGL53-ECY23. Springhill soils are located on the mid to upper slopes. Economy soils are found in poorly drained depressions and flat areas, and on the lower slopes that collect seepage and runoff.

SGL23-HFD23; SGL23-HFD53; SGL52-HFD52; SGL53-HFD53; SGL53-HFD83. Springhill soils are located on mid to lower slopes. Hansford soils are found on knolls and upper slopes that have good surface drainage.

SOUTH ALTON SOIL GROUP (SHN23, SHN53)

Soil material and landform

Soils of the South Alton group have developed on coarse loamy-gravelly till veneer over bedrock. They are well drained and are found on nearly level to moderate slopes.

Soil material	: Coarse loamy-gravelly till veneer over bedrock
Drainage range	: Well to moderately well; dominantly well drained
Slope range	: 2-15%; dominantly 5-9%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky to slightly rocky; dominantly slightly rocky
Depth of constricting layer	: 20-80 cm
Kind of constricting layer	: Bedrock

Location and extent

Soils of the South Alton group cover less than 1% or 316 ha (10 areas) of the survey area. South Alton soils are found near the shore in Hants County between Walton and Maitland.

Profile characteristics of South Alton 23 soils (SHN23)

South Alton 23 soils have 20-50 cm of friable, coarse loamy-gravelly, soil over bedrock. They are similar to South Alton 53 soils but have less soil over bedrock. South Alton 53 soil data can be used to estimate the profile characteristics of South Alton 23 soils.

Profile characteristics of South Alton 53 soils (SHN53)

South Alton 53 soils have 50-80 cm of friable, coarse loamy-gravelly, soil over bedrock.

Soil material (all material over bedrock except Ap and Ah horizons)

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy-gravelly
% sand	: 67 (range: 64-69; n=2)
% silt	: 20 (range: 18-21; n=2)
% clay	: 13 (range: 11-15; n=2)
Coarse fragments ($\frac{1}{2}$ volume)	: 20-35
Bulk density (g/cm^3)	: 1.5 (range: 1.3-1.7; n=2)
Hydraulic conductivity (cm/h)	: 17 (range: 14-19; n=2)
pH (H_2O)	: 5.5 (range: 5.5-5.7; n=2)

Map units

SHN23; SHN53. Most of the South Alton map units are slightly rocky and are located on mid to upper slopes.

SHN23-VRN53. South Alton soils are found on the knolls and upper slopes. Vernon Mines soils are located on the lower slopes that receive runoff and seepage. Map units are found in areas with shallow till overlying hard Horton bedrock.

SHN53-HFD23. South Alton and Hansford soils are randomly mixed in the units. South Alton 53 soils are found when the bedrock is within 80 cm of the surface. Hansford soils are found when the bedrock is deeper than 80 cm.

STEWIACKE SOILS (STW)

Soil material and landform

Stewiacke soils have developed on fine loamy alluvium. They are poorly drained and are found on level to nearly level floodplains.

Soil material	: Fine loamy alluvium (includes fine silty)
Drainage	: Poor with very frequent flooding
Slope range	: 0-2%
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent

Location and extent

Stewiacke soils cover about less the 1% or 603 ha (32 areas) of the survey area. Over 70 % of Stewiacke soils are mapped along rivers that empty into the Shubenacadie River and into Cobequid Bay from eastern Hants County. The soils are also found in the Stewiacke area, in areas north of Cobequid Bay and in western Hants County.

Profile characteristics of Stewiacke soils (STW)

Stewiacke soils have over 80 cm of friable to firm, fine loamy soil material. Thin sandy or coarse loamy layers are frequently found in Stewiacke soils. The soils are permeable to roots but transmit water slowly. Stewiacke soils are similar to Cherryfield soils, but are wetter. Cherryfield soil data can be used to estimate the profile characteristics for Stewiacke soils.

Map units

STW. Stewiacke map units are found on poorly drained, fine loamy, floodplains that flood very frequently.

TRURO SOIL GROUP (TU052, TU0X2)

Lower soil material and landform

Soils of the Truro group have developed on fine sandy glaciofluvial sediments. They are well drained and are found on level to strong slopes.

Lower soil material	: Fine sandy glaciofluvial sediments
Drainage	: Well
Slope range	: 0-30%; dominantly 2-9%
Stoniness range	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth of constricting layer	: Absent in Truro 52 soils; 45-55 cm in Truro X2 soils
Kind of constricting layer	: Ortstein or fragipan in Truro X2 soils

Location and extent

Soils of the Truro group cover about 4% or 4 796 ha (285 areas) of the survey area. More than 90% of Truro soils are located north of Cobequid Bay in Colchester County.

Profile characteristics of Truro 52 soils (TU052)

Truro 52 soils have 50-80 cm of friable, coarse loamy, soil over loose, fine sandy lower soil material.

Upper soil material

Thickness range	: 50-80 cm
Consistence	: Friable
Particle size class	: Coarse loamy
% sand	: 75 (range: 65-84; n= 3)
% silt	: 15 (range: 9-25; n= 3)
% clay	: 10 (range 7-13; n= 3)
Coarse fragments (% volume)	: Less than 5
Bulk density (g/cm ³)	: 1.5 (range: 1.2-1.7; n= 2)
Hydraulic conductivity (cm/h)	: 7.0 (range: 1.5-15.7; n= 3)
pH (H ₂ O)	: 5.9 (range: 5.8-5.9; n= 3)
CEC (meg/100g)	: 2.5 (range: 1.2-4.4; n= 3)
% organic matter	: 1.7 (range: 0.1-2.8; n= 3)
% organic matter in Ap	: 3.3 (range: 2.1-5.1; n= 3)

Lower soil material

Consistence	: Loose
Particle size class	: Fine sandy
% sand	: 83 (range: 76-90; n= 3)
% silt	: 10 (range: 2-20; n= 3)
% clay	: 7 (range: 4-9; n= 3)
Coarse fragments (% volume)	: Less than 5
Bulk density (g/cm ³)	: 1.6 (range: 1.4-1.7; n= 3)
Hydraulic conductivity (cm/h)	: 5.5 (range: 2.7-7.6; n= 3)
pH (H ₂ O)	: 5.8 (range: 5.7-6.0; n= 3)
CEC (meg/100g)	: 1.6 (range: 0.5-2.7; n= 3)

Profile characteristics of Truro X2 soils (TUOX2)

Truro X2 soils have 45-55 cm of friable, coarse loamy, soil over 10-30 cm of cemented soil over loose, fine sandy, lower soil material. The cemented ortstein or fragipan layer limits rooting and water movement when it is thick, strongly cemented, and continuous.

The characteristics of the friable and loose layers in the Truro X2 soils are similar to the Truro 52 soils. Some of the profile data for the Truro 52 soil can be used to estimate profile characteristics for Truro X2 soils. The upper soil material of a Truro X2 soil would have a slower hydraulic conductivity than 7 cm/h, and a bulk density greater than 1.5 g/cm³.

Map units

TUO52; TUOX2. Truro 52 soils are found on all slope positions except depressions with restricted drainage. The location of Truro X2 soils is unpredictable when the cemented layer is not well developed. Truro X2 soils with well developed cemented layers are found on lower slopes adjacent to imperfectly drained Onslow or Debert soils.

TUO52-TUOX2. Truro 52 and X2 soils are randomly mixed in the unit. The units are found on all slope positions except depressions with restricted drainage.

TUO52-DRT82; TUO52-OSW52. Truro 52 soils are found on the mid to upper slopes and the Debert 52 and Onslow 52 soils are located on the lower slopes and in imperfectly drained depressions.

Profile characteristics of Vernon mines 52 soils (VRN52)

Vernon Mines 52 soils have 50-80 cm of friable, coarse loamy, soil over bedrock. They are similar to Vernon Mines 23 soils but are deeper and contain less gravel. Vernon Mines 23 soil data can be used to estimate the profile characteristics of Vernon Mines 52 soils.

Profile characteristics of Vernon mines 53 soils (VRN53)

Vernon Mines 53 soils have 50-80 cm of friable, coarse loamy-gravelly, soil over bedrock. They are similar to Vernon Mines 23 soils but are deeper. Vernon Mines 23 soil data can be used to estimate the profile characteristics of Vernon Mines 53 soils.

Map units

VRN23; VRN52; VRN53. Most of the Vernon Mines map units are slightly rocky. The units are located on upper, mid and lower slopes that have restricted surface drainage.

VRN23-SHN53. South Alton 53 soils are found on the knolls and upper slopes that have good surface drainage. Vernon Mines 23 soils are found on the mid to lower slopes that receive runoff and seepage.

VRN53-DRT52. Vernon Mines 53 and Debert 52 soils are randomly mixed in the map unit.

WOODBOURNE SOIL GROUP (WOB22, WOB52, WOB53)

Soil material and landform

Soils of the Woodbourne group have developed on coarse loamy over fine loamy-gravelly till and on coarse loamy-gravelly over fine loamy-gravelly till. They are moderately well drained and are found on gentle to moderate slopes.

Lower soil material	: Fine loamy-gravelly till
Drainage	: Moderately well
Slope range	: 5-15%; dominantly 5-9%
Stoniness range	: Nonstony to slightly stony
Rockiness	: Nonrocky
Depth of constricting layer	: 20-80 cm
Kind of constricting layer	: Compact till

Location and extent

Soils of the Woodbourne group cover about 0.1% or 146 ha (11 areas) of the survey area. Most Woodbourne soils are found in Hants County. Smaller areas are located north of Cobequid Bay in Colchester County.

Profile characteristics of Woodbourne 22 soils (WOB22)

Woodbourne 22 soils have 20-50 cm of friable, coarse loamy, soil over firm, fine loamy-gravelly lower soil material.

Profile characteristics of Woodbourne 52 soils (WOB52)

Woodbourne 52 soils have 50-80 cm of friable, coarse loamy, soil over firm, fine loamy-gravelly, lower soil material.

Profile characteristics of Woodbourne 53 soils (WOB53)

Woodbourne 53 soils have 50-80 cm of friable, coarse loamy-gravelly, soil over firm, fine loamy-gravelly, lower soil material.

The Woodbourne soil group is similar to the Hantsport soil group but has better drainage. Data for the Hantsport soil group can be used to estimate the profile characteristic of Woodbourne 22, 23 and 53 soils.

Map units

WOB22; WOB53. Woodbourne 22 and 53 map units are found on knolls and upper slopes that have good surface drainage.

WOB52-HTP52: Woodbourne 52 soils are located on the upper slopes and knolls. Hantsport 52 soils are located on the mid to lower slopes that receive seepage and runoff.

LAND TYPES

Coastal beaches (ZCB)

Coastal beach units consist of sands and sorted gravel deposits. These units are located only on map sheets that have shoreline on the Bay of Fundy.

Escarpment (ZES)

Escarpment units contain areas with steep to very steep slopes. Slopes are always greater than 75% and frequently greater than 100%.

Gravel pits (ZGP)

Gravel pit units contain areas that have been used as a source of aggregate. The aggregate is usually gravel but some units may contain significant amounts of sand.

Gully (ZGY)

Gully units are areas that have been deeply incised by the erosive action of fast flowing streams and rivers. These units commonly contain inclusions of alluvial soils.

Not surveyed (ZNS)

Not surveyed units represent areas that are excluded from the survey and have not been mapped. Areas having low capability for agriculture, wildlife sanctuaries, Department of National Defense lands, etc. are included in this unit.

River course (ZRC)

River course map units are sand and gravel bars that are exposed when river flow is reduced and water levels drop. In tidal rivers, sand and gravel bars are exposed at low tide.

Salt marsh (ZSM)

Salt marsh map units contain areas of fine loamy marine sediments deposited by tidal waters. These units border the Bay of Fundy and are also associated with tidal rivers.

Urban land (ZUL)

Urban land map units include all urban oriented areas large enough to be delineated on the map. Business and residential districts, including houses and yards and associated infrastructure such as roads and stores were included in this unit.

Water bodies (ZZZ)

Water bodies large enough to be delineated are coded ZZZ on digital maps. However on the maps included in this report, water bodies are colored blue and are not symbolized.

PART 4. SOIL INTERPRETATIONS FOR AGRICULTURE

Soil interpretations for agriculture are based on the evaluation of climate and soil characteristics that influence soil suitability for farming. Soils are grouped into classes and subclasses based on their limitations for rain fed farming (irrigation is assumed for vegetables only), their susceptibility to degradation, and their response to management. Interpretations in this report are based on the following assumptions:

1. Good soil and crop management practices that are feasible are carried out. This includes the use of fertilizers, lime, artificial drainage, and proper weed and pest control. Surface ditching, land forming, and dyke maintenance are practiced for marine soils. Drainage is improved by one class where tile drainage is feasible. Tile drainage is assumed to be feasible for all except the following:
 - a) map units with slopes less than 2% or over 15%
 - b) map units with rockiness classes of 4 or 5
 - c) map units with stoniness classes of 4 or 5
 - d) soils with bedrock within 80 cm of the surface
 - e) soils subject to frequent or very frequent inundation
 - f) organic soils.
2. Soils within a class have a similar degree of limitation although the kind of limitation may be different. Each class includes several soils which may require a different management system for crop production because of their different limitations. Subclasses provide information on the type of limitation while the class denotes the intensity of the limitation.
3. Only the most severe limitations are noted. For example, if the drainage limitation of a soil is 5W and its topographic limitation is 4T, the rating is 5W. A soil is rated 5TW only if the both the topographic and drainage limitations are 5.
4. Distance to market, availability of land transportation, size of farm, cultural patterns, and exceptional skill or resources of the farm operator are not criteria for this classification.
5. The interpretations are subject to change as new information on soil response to management becomes available. New technology or a change in economic conditions also require a new classification.

CLI capability classification for agriculture

The CLI Capability Classification for Agriculture groups soils into seven classes (Department of Environment 1972). The first three classes are considered capable of sustained production of common field crops, the fourth is marginal for sustained arable agriculture, the fifth is capable of use only for improved permanent pasture, the sixth is capable of use only for wild pasture, and the seventh class includes soils and land types considered incapable of sustained agricultural use. Although soils in classes one to four are capable for use for cultivated field crops, they are also capable for use as permanent pasture. For purposes of this classification, trees, shrubs, and ornamental plants that require little cultivation are not considered. The interpretations do apply to small grains, silage corn, and forage crops. Table 10 can be used to find the CLI ratings for map units described in this report.

Capability classes

Class 1. Soils in this class have no significant limitations for crop production. No map units in Nova Scotia are rated Class 1 because the regional climate (insufficient heat units) is considered a limitation for optimal crop growth. Soils normally rated Class 1 were therefore reduced to Class 2 and assigned the subclass C.

Class 2. Soils in this class have moderate limitations that restrict the range of crops grown. The only limitation in this class in Nova Scotia is adverse climate.

Class 3. Soils in this class have moderately severe limitations that restrict the range of crops grown. In this class the type of limitation found may be one or more of the following: inundation, moisture limitation, stoniness, consolidated bedrock, topography, excess water (applies to the continuing drainage of the soil after improvement, if feasible, by tile), undesirable structure or low permeability, and coarse fragments.

Class 4. Soils in this class have severe limitations that restrict the range of crops or require special conservation practices or both. In this class the type of limitation found may be one or more of the following: inundation, moisture limitation, stoniness, consolidated bedrock, topography, excess water (applies to the continuing drainage of the soil after improvement, if feasible, by tile), undesirable structure or low permeability, and coarse fragments or the cumulative effect of three or more Class 3 limitations.

Class 5. Soils in this class have very severe limitations that restrict their capability to producing perennial forage crops. Improvement practices are feasible. In this class, the type of limitation found may be one or more of the following: inundation, moisture limitation, stoniness, consolidated bedrock, topography, excess water (applies to the continuing drainage of the soil after improvement, if feasible, by tile), undesirable structure or low permeability, and coarse fragments or the cumulative effect of three or more Class 5 limitations.

Class 6. Soils in this class are capable only of producing perennial forage crops and improvement practices are not feasible. Most soils in Nova Scotia revert to forest if not maintained by man so map units normally keyed to Class 6 have been rated Class 7.

Class 7. Soils in this class have no capability for the production of common field crops or permanent pasture. In this class the type of limitation found may be topography or the cumulative effect of three or more Class 5 limitations.

Capability subclasses

Adverse climate (C). This subclass indicates inadequate heat units for the optimal growth of a wide range of crops. It is used for Class 2 soils only.

Undesirable soil structure or slow permeability (D). This subclass is used for soils with a potential rooting zone restricted by conditions other than a high water table or consolidated bedrock (e.g. compact till).

Coarse fragments (G). This subclass includes soils that contain enough coarse fragments to impede seed germination and optimum root development and to increase the wear and tear on tillage machinery.

Inundation by streams or lakes (I). This subclass includes soils subjected to inundation causing crop damage or restricting agricultural use.

Moisture (M). This subclass consists of soils on which crops are adversely affected by lack of water due to inherent soil characteristics.

Stoniness (P). This subclass includes map units sufficiently stony to significantly hinder tillage, planting and harvesting operations.

Consolidated bedrock (R). This subclass includes soils where the presence of bedrock near the surface restricts their agricultural use.

Topography (T). This subclass includes map units that are limited by topography. Steepening slopes increase the cost of farming by decreasing the uniformity of crop growth and maturity and by increasing the risk of water erosion.

Excess water (W). This subclass includes soils in which excess water other than that brought about by inundation is a limitation to use. Excess water may result from inadequate soil drainage, a high water table, seepage or run-off from surrounding areas.

Cumulative adverse characteristics (X). This subclass is made up of soils which have three or more limitations of the same degree. The soil is downgraded one class and assigned the X subclass.

How to use the CLI rating key

Step 1: For each soil in the map unit find:

- mode of deposition
- lower soil material particle size
- surface soil material (ie. friable soil) particle size
- depth of friable soil
- drainage
- slope

Step 2: Follow the key in Table 12 to determine the CLI rating for each soil in the map unit.

Example 1: QUE52
B

mode of deposition	till	1.
subsoil particle size	fine loamy	1.1
friable soil particle size	coarse loamy	1.1.1.
depth of friable soil	50 - 80 cm	1.1.1.1.
drainage	imperfect	1.1.1.1.2.
slope	B (2 to 5%)	1.1.1.1.2.1

Final CLI rating for the simple map unit is 3W.

Example 2: QUE52>PGW82
B

Soil 1 - QUE52 see example 1
B

Soil 2 - PGW82
B

mode of deposition	till	1.
subsoil particle size	coarse loamy	1.1
friable soil particle size	coarse loamy	1.1.1.
depth of friable soil	>80 cm	1.1.1.1.
drainage	well	1.1.1.1.1.
slope	B (2 to 5%)	1.1.1.1.1.1

CLI rating for the second soil is 2C.

Final CLI rating for the compound map unit is 3W > 2C.

Table 12. Soil capability for agriculture key

For slopes of >30% (all soils).....7T

1. Mode of deposition: Till

1.1 Subsoil particle size: fine loamy, coarse loamy, fine loamy-gravelly or coarse loamy-gravelly

1.1.1 Surface material particle size: coarse loamy or coarse loamy-gravelly

1.1.1.1 Depth to compact subsoil: >50 cm

1.1.1.1.1 Drainage: well or moderately well

1.1.1.1.1.1 Slope: 0 to 5% 2C

1.1.1.1.1.2 Slope: 5 to 9% 3T

1.1.1.1.1.3 Slope: 9 to 15% 4T

1.1.1.1.1.4 Slope: 15 to 30% 5T

1.1.1.1.2 Drainage: imperfect

1.1.1.1.2.1 Slope: 0 to 2% 3W

1.1.1.1.2.2 Slope: 2 to 5% 2C

1.1.1.1.2.3 Slope: 5 to 9% 3T

1.1.1.1.2.4 Slope: 9 to 15% 4T

1.1.1.1.2.5 Slope: 15 to 30% 5T

1.1.1.1.3 Drainage: poor

1.1.1.1.3.1 Slope: 0 to 2% 5W

1.1.1.1.3.2 Slope: 2 to 5% 3W

1.1.1.1.3.3 Slope: 5 to 9% 3TW

1.1.1.1.3.4 Slope: 9 to 15% 4T

1.1.1.1.3.5 Slope: 15 to 30% 5T

1.1.1.2 Depth to compact subsoil: 20 to 50 cm

1.1.1.2.1 Drainage: well or moderately well

1.1.1.2.1.1 Slope: 0 to 5% 3D

1.1.1.2.1.2 Slope: 5 to 9% 3DT

1.1.1.2.1.3 Slope: 9 to 15% 4T

1.1.1.2.1.4 Slope: 15 to 30% 5T

1.1.1.2.2 Drainage: imperfect

1.1.1.2.2.1 Slope: 0 to 2% 4W

1.1.1.2.2.2 Slope: 2 to 5% 3D

1.1.1.2.2.3 Slope: 5 to 9% 3DT

1.1.1.2.2.4 Slope: 9 to 15% 4T

1.1.1.2.2.5 Slope: 15 to 30% 5T

(continued)

Table 12. Soil capability for agriculture key (continued)

1.1.1.2.3	Drainage: poor	
1.1.1.2.3.1	Slope: 0 to 2%	5W
1.1.1.2.3.2	Slope: 2 to 9%	4W
1.1.1.2.3.3	Slope: 9 to 15%	4TW
1.1.1.2.3.4	Slope: 15 to 30%	5T
1.1.2	Surface material particle size: fine loamy or fine loamy-gravelly	
1.1.2.1	Depth to compact subsoil: 20 to 50 cm	
1.1.2.1.2	Drainage: imperfect	
1.1.2.1.2.1	Slope: 0 to 9%	4DW
1.1.2.1.2.2	Slope: 9 to 15%	5X
1.1.2.1.2.3	Slope: 15 to 30%	5T
1.1.2.1.3	Drainage: poor	
1.1.2.1.3.1	Slope: 0 to 15%	5DW
1.1.2.1.3.2	Slope: 15 to 30%	7X
1.2	Subsoil particle size: skeletal-loamy	
1.2.1	Surface material particle size: coarse loamy gravelly	
1.2.1.1	Depth of surface material: 50 to 80 cm	
1.2.1.1.1	Drainage: well	
1.2.1.1.1.1	Slope: 0 to 5%	2C
1.2.1.1.1.2	Slope: 5 to 9%	3T
1.2.1.1.1.3	Slope: 9 to 15%	4T
1.2.1.1.1.4	Slope: 15 to 30%	5T
1.2.1.1.2	Drainage: imperfect	
1.2.1.1.2.1	Slope: 0 to 2%	3W
1.2.1.1.2.2	Slope: 2 to 5%	2C
1.2.1.1.2.3	Slope: 5 to 9%	3T
1.2.1.1.2.4	Slope: 9 to 15%	4T
1.2.1.1.2.5	Slope: 15 to 30%	5T
1.2.1.1.3	Drainage: poor	
1.2.1.1.3.1	Slope: 0 to 2%	5W
1.2.1.1.3.2	Slope: 2 to 5%	3W
1.2.1.1.3.3	Slope: 5 to 9%	3TW
1.2.1.1.3.4	Slope: 9 to 15%	4T
1.2.1.1.3.5	Slope: 15 to 30%	5T

(continued)

Table 12. Soil capability for agriculture key (continued)

1.2.1.2 Depth of surface material: 20 to 50 cm

1.2.1.2.1 Drainage: well

- 1.2.1.2.1.1 Slope: 0 to 5% 3G
- 1.2.1.2.1.2 Slope: 5 to 9% 3GT
- 1.2.1.2.1.3 Slope: 9 to 15% 4T
- 1.2.1.2.1.4 Slope: 15 to 30% 5T

1.2.1.2.2 Drainage: imperfect

- 1.2.1.2.2.1 Slope: 0 to 2% 3GW
- 1.2.1.2.2.2 Slope: 2 to 5% 3G
- 1.2.1.2.2.3 Slope: 5 to 9% 3GT
- 1.2.1.2.2.4 Slope: 9 to 15% 4T
- 1.2.1.2.2.5 Slope: 15 to 30% 5T

1.2.1.2.3 Drainage: poor

- 1.2.1.2.3.1 Slope: 0 to 2% 5W
- 1.2.1.2.3.2 Slope: 2 to 5% 3GW
- 1.2.1.2.3.3 Slope: 5 to 9% 4X
- 1.2.1.2.3.4 Slope: 9 to 15% 4T
- 1.2.1.2.3.5 Slope: 15 to 30% 5T

1.2.2 Surface material particle size: skeletal-loamy

1.2.2.1 Depth to compact subsoil: >80 cm

1.2.2.1.1 Drainage: well

- 1.2.2.1.1.1 Slope: 0 to 9% 4G
- 1.2.2.1.1.2 Slope: 9 to 15% 4GT
- 1.2.2.1.1.3 Slope: 15 to 30% 5T

1.2.2.1.2 Drainage: imperfect

- 1.2.2.1.2.1 Slope: 0 to 9% 4G
- 1.2.2.1.2.2 Slope: 9 to 15% 4GT
- 1.2.2.1.2.3 Slope: 15 to 30% 5T

1.2.2.1.3 Drainage: poor

- 1.2.2.1.3.1 Slope: 0 to 2% 5W
- 1.2.2.1.3.2 Slope: 2 to 9% 4GW
- 1.2.2.1.3.3 Slope: 9 to 15% 5X
- 1.2.2.1.3.4 Slope: 15 to 30% 5T

(continued)

Table 12. Soil capability for agriculture key (continued)

1.3 Subsoil particle size: bedrock

1.3.1 Surface material particle size: coarse loamy or coarse loamy-gravelly

1.3.1.1 Depth of surface material: 50 to 80 cm

1.3.1.1.1 Drainage: well

1.3.1.1.1.1 Slope: 0 to 5% 3R

1.3.1.1.1.2 Slope: 5 to 9% 3RT

1.3.1.1.1.3 Slope: 9 to 15% 4T

1.3.1.1.1.4 Slope: 15 to 30% 5T

1.3.1.1.2 Drainage: imperfect

1.3.1.1.2.1 Slope: 0 to 5% 3RW

1.3.1.1.2.2 Slope: 5 to 9% 4X

1.3.1.1.2.3 Slope: 9 to 15% 4T

1.3.1.1.2.4 Slope: 15 to 30% 5T

1.3.1.1.3 Drainage: poor

1.3.1.1.3.1 Slope: 0 to 15% 5W

1.3.1.1.3.2 Slope: 15 to 30% 5TW

1.3.1.2 Depth of surface material: 20 to 50 cm

1.3.1.2.1 Drainage: well

1.3.1.2.1.1 Slope: 0 to 15%.....5R

1.3.1.2.1.2 Slope: 15 to 30% 5RT

1.3.1.2.2 Drainage: imperfect

1.3.1.2.2.1 Slope: 0 to 15%.....5R

1.3.1.2.2.2 Slope: 15 to 30% 5RT

1.3.1.2.3 Drainage: poor

1.3.1.2.3.1 Slope: 0 to 15% 5RW

1.3.1.2.3.2 Slope: 15 to 30% 7X

1.3.2 Surface material particle size: skeletal-loamy

1.3.2.1 Depth of surface material: 50 to 80 cm

1.3.2.1.1 Drainage: well

1.3.2.1.1.1 Slope: 0 to 5% 3GR

1.3.2.1.1.2 Slope: 5 to 9% 4X

1.3.2.1.1.3 Slope: 9 to 15% 4T

1.3.2.1.1.4 Slope: 15 to 30% 5T

(continued)

Table 12. Soil capability for agriculture key (continued)

1.3.2.1.2 Drainage: imperfect
 1.3.2.1.2.1 Slope: 0 to 5% 3GR
 1.3.2.1.2.2 Slope: 5 to 9% 4X
 1.3.2.1.2.3 Slope: 9 to 15% 4T
 1.3.2.1.2.4 Slope: 15 to 30% 5T

1.3.2.1.3 Drainage: poor
 1.3.2.1.3.1 Slope: 0 to 9% 5W
 1.3.2.1.3.2 Slope: 9 to 15% 5X
 1.3.2.1.3.3 Slope: 15 to 30% 5T

1.3.2.2 Depth of surface material: 20 to 50 cm

1.3.2.2.1 Drainage: well
 1.3.2.2.1.1 Slope: 0 to 15% 5R
 1.3.2.2.1.2 Slope: 15 to 30% 5RT

1.3.2.2.2 Drainage: imperfect
 1.3.2.2.2.1 Slope: 0 to 15% 5R
 1.3.2.2.2.3 Slope: 15 to 30% 5RT

1.3.2.2.3 Drainage: poor
 1.3.2.2.3.1 Slope: 0 to 15% 5RW
 1.3.2.2.3.2 Slope: 15 to 30% 7X

2. Mode of deposition: Glaciofluvial

2.1 Subsoil particle size: skeletal-sandy or sandy-gravelly

2.1.1 Surface material particle size: coarse loamy or coarse loamy-gravelly

2.1.1.1 Depth of surface material: 50 to 80 cm

2.1.1.1.1 Drainage: well
 2.1.1.1.1.1 Slope: 0 to 5% 2C
 2.1.1.1.1.2 Slope: 5 to 9% 3T
 2.1.1.1.1.3 Slope: 9 to 15% 4T
 2.1.1.1.1.4 Slope: 15 to 30% 5T

2.1.1.1.2 Drainage: imperfect
 2.1.1.1.2.1 Slope: 0 to 2% 3W
 2.1.1.1.2.2 Slope: 2 to 5% 2C
 2.1.1.1.2.3 Slope: 5 to 9% 3T
 2.1.1.1.2.4 Slope: 9 to 15% 4T
 2.1.1.1.2.5 Slope: 15 to 30% 5T

(continued)

Table 12. Soil capability for agriculture key (continued)

2.1.1.1.3	Drainage: poor	
2.1.1.1.3.1	Slope: 0 to 2%	5W
2.1.1.1.3.2	Slope: 2 to 5%	3W
2.1.1.1.3.3	Slope: 5 to 9%	3TW
2.1.1.1.3.4	Slope: 9 to 15%	4T
2.1.1.1.3.5	Slope: 15 to 30%	5T
2.1.1.2	Depth of surface material: 20 to 50 cm	
2.1.1.2.1	Drainage: rapid	
2.1.1.2.1.1	Slope: 0 to 5%	3M
2.1.1.2.1.2	Slope: 5 to 9%	3MT
2.1.1.2.1.3	Slope: 9 to 15%	4T
2.1.1.2.1.4	Slope: 15 to 30%	5T
2.1.1.2.2	Drainage: imperfect	
2.1.1.2.2.1	Slope: 0 to 2%	3MW
2.1.1.2.2.2	Slope: 2 to 5%	3M
2.1.1.2.2.3	Slope: 5 to 9%	3MT
2.1.1.2.2.4	Slope: 9 to 15%	4T
2.1.1.2.2.5	Slope: 15 to 30%	5T
2.1.1.2.3	Drainage: poor	
2.1.1.2.3.1	Slope: 0 to 2%	5W
2.1.1.2.3.2	Slope: 2 to 5%	3MW
2.1.1.2.3.3	Slope: 5 to 9%	4X
2.1.1.2.3.4	Slope: 9 to 15%	4T
2.1.1.2.3.5	Slope: 15 to 30%	5T
2.1.2	Surface material particle size: sandy	
2.1.2.1	Depth of surface material: 50 to 80 cm	
2.1.2.1.1	Drainage: rapid	
2.1.2.1.1.1	Slope: 0 to 5%	3M
2.1.2.1.1.2	Slope: 5 to 9%	3MT
2.1.2.1.1.3	Slope: 9 to 15%	4T
2.1.2.1.1.4	Slope: 15 to 30%	5T
2.1.2.1.2	Drainage: imperfect	
2.1.2.1.2.1	Slope: 0 to 5%	3MW
2.1.2.1.2.2	Slope: 5 to 9%	4X
2.1.2.1.2.3	Slope: 9 to 15%	4T
2.1.2.1.2.4	Slope: 15 to 30%	5T

(continued)

Table 12. Soil capability for agriculture key (continued)

2.1.2.1.3	Drainage: poor	
2.1.2.1.3.1	Slope: 0 to 9%	4MW
2.1.2.1.3.2	Slope: 9 to 15%	5X
2.1.2.1.3.3	Slope: 15 to 30%	5T
2.1.2.2	Depth of surface material: 20 to 50 cm	
2.1.2.2.1	Drainage: rapid	
2.1.2.2.1.1	Slope: 0 to 9%	4M
2.1.2.2.1.2	Slope: 9 to 15%	4MT
2.1.2.2.1.3	Slope: 15 to 30%	5T
2.1.2.2.2	Drainage: imperfect	
2.1.2.2.2.1	Slope: 0 to 5%	3MW
2.1.2.2.2.2	Slope: 5 to 9%	4X
2.1.2.2.2.3	Slope: 9 to 15%	4T
2.1.2.2.2.4	Slope: 15 to 30%	5T
2.1.2.2.3	Drainage: poor	
2.1.2.2.3.1	Slope: 0 to 9%	4MW
2.1.2.2.3.2	Slope: 9 to 15%	5X
2.1.2.2.3.3	Slope: 15 to 30%	5T
2.1.3	Surface material particle size: skeletal-sandy or sandy-gravelly	
2.1.3.1	Depth of surface material: >80 cm	
2.1.3.1.1	Drainage: rapid	
2.1.3.1.1.1	Slope: 0 to 9%	4M
2.1.3.1.1.2	Slope: 9 to 15%	4MT
2.1.3.1.1.3	Slope: 15 to 30%	5T
2.1.3.1.2	Drainage: imperfect	
2.1.3.1.2.1	Slope: 0 to 5%	3MW
2.1.3.1.2.2	Slope: 5 to 9%	4X
2.1.3.1.2.3	Slope: 9 to 15%	4T
2.1.3.1.2.4	Slope: 15 to 30%	5T
2.1.3.1.3	Drainage: poor	
2.1.3.1.3.1	Slope: 0 to 9%	4MW
2.1.3.1.3.2	Slope: 9 to 15%	5X
2.1.3.1.3.3	Slope: 15 to 30%	5T

(continued)

Table 12. Soil capability for agriculture key (continued)

2.2 Subsoil particle size: sandy

2.2.1 Surface material particle size: sandy-fine

2.2.1.1 Depth of surface material: 50 to 80 cm

2.2.1.1.1 Drainage: well

2.2.1.1.1.1 Slope: 0 to 5%	2C
2.2.1.1.1.2 Slope: 5 to 9%	3T
2.2.1.1.1.3 Slope: 9 to 15%	4T
2.2.1.1.1.4 Slope: 15 to 30%	5T

2.2.1.1.2 Drainage: imperfect

2.2.1.1.2.1 Slope: 0 to 2%	3W
2.2.1.1.2.2 Slope: 2 to 5%	2C
2.2.1.1.2.3 Slope: 5 to 9%	3T
2.2.1.1.2.4 Slope: 9 to 15%	4T
2.2.1.1.2.5 Slope: 15 to 30%	5T

2.2.1.1.3 Drainage: poor

2.2.1.1.3.1 Slope: 0 to 2%	5W
2.2.1.1.3.2 Slope: 2 to 5%	3W
2.2.1.1.3.3 Slope: 5 to 9%	3TW
2.2.1.1.3.4 Slope: 9 to 15%	4T
2.2.1.1.3.5 Slope: 15 to 30%	5T

2.2.2 Surface material particle size: sandy

2.2.2.1 Depth of surface material: >80 cm

2.2.2.1.1 Drainage: rapid

2.2.2.1.1.1 Slope: 0 to 5%	3M
2.2.2.1.1.2 Slope: 5 to 9%	3MT
2.2.2.1.1.3 Slope: 9 to 15%	4T
2.2.2.1.1.4 Slope: 15 to 30%	5T

2.2.2.1.2 Drainage: imperfect

2.2.2.1.2.1 Slope: 0 to 5%	3MW
2.2.2.1.2.3 Slope: 5 to 9%	4X
2.2.2.1.2.4 Slope: 9 to 15%	4T
2.2.2.1.2.5 Slope: 15 to 30%	5T

2.2.2.1.3 Drainage: poor

2.2.2.1.3.1 Slope: 0 to 2%	5W
2.2.2.1.3.2 Slope: 2 to 5%	3W
2.2.2.1.3.3 Slope: 5 to 9%	3TW
2.2.2.1.3.4 Slope: 9 to 15%	4T
2.2.2.1.3.5 Slope: 15 to 30%	5T

(continued)

Table 12. Soil capability for agriculture key (continued)

2.3 Subsoil particle size: sandy-fine

2.3.1 Surface material particle size: sandy-fine

2.3.1.1 Depth of surface material: >80 cm

2.3.1.1.1 Drainage: well

2.3.1.1.1.1 Slope: 0 to 5%	2C
2.3.1.1.1.2 Slope: 5 to 9%	3T
2.3.1.1.1.3 Slope: 9 to 15%	4T
2.3.1.1.1.4 Slope: 15 to 30%	5T

2.3.1.1.2 Drainage: imperfect

2.3.1.1.2.1 Slope: 0 to 2%	3W
2.3.1.1.2.2 Slope: 2 to 5%	2C
2.3.1.1.2.3 Slope: 5 to 9%	3T
2.3.1.1.2.4 Slope: 9 to 15%	4T
2.3.1.1.2.5 Slope: 15 to 30%	5T

2.3.1.1.3 Drainage: poor

2.3.1.1.3.1 Slope: 0 to 2%	5W
2.3.1.1.3.2 Slope: 2 to 5%	3W
2.3.1.1.3.3 Slope: 5 to 9%	3TW
2.3.1.1.3.4 Slope: 9 to 15%	4T
2.3.1.1.3.5 Slope: 15 to 30%	5T

2.3.2 Surface material particle size: coarse loamy

2.3.2.1 Depth of surface material: 20-80 cm
(ortstein soils included here)

2.3.2.1.1 Drainage: well

2.3.2.1.1.1 Slope: 0 to 5%	2C
2.3.2.1.1.2 Slope: 5 to 9%	3T
2.3.2.1.1.3 Slope: 9 to 15%	4T
2.3.2.1.1.4 Slope: 15 to 30%	5T

2.3.2.1.2 Drainage: imperfect

2.3.2.1.2.1 Slope: 0 to 2%	3W
2.3.2.1.2.2 Slope: 2 to 5%	2C
2.3.2.1.2.3 Slope: 5 to 9%	3T
2.3.2.1.2.4 Slope: 9 to 15%	4T
2.3.2.1.2.5 Slope: 15 to 30%	5T

(continued)

Table 12. Soil capability for agriculture key (continued)

2.3.2.1.3 Drainage: poor

- 2.3.2.1.3.1 Slope: 0 to 2% 5W
- 2.3.2.1.3.2 Slope: 2 to 5% 3W
- 2.3.2.1.3.3 Slope: 5 to 9% 3TW
- 2.3.2.1.3.4 Slope: 9 to 15% 4T
- 2.3.2.1.3.5 Slope: 15 to 30% 5T

2.3.3 Surface material particle size: sandy

2.3.3.1 Depth of surface material: 50-80 cm

2.3.3.1.1 Drainage: well

- 2.3.3.1.1.1 Slope: 0 to 5% 3M
- 2.3.3.1.1.2 Slope: 5 to 9% 3MT
- 2.3.3.1.1.3 Slope: 9 to 15% 4T
- 2.3.3.1.1.4 Slope: 15 to 30% 5T

2.3.3.1.2 Drainage: imperfect

- 2.3.3.1.2.1 Slope: 0 to 5% 3MW
- 2.3.3.1.2.3 Slope: 5 to 9% 4X
- 2.3.3.1.2.4 Slope: 9 to 15% 4T
- 2.3.3.1.2.5 Slope: 15 to 30% 5T

2.3.3.1.3 Drainage: poor

- 2.3.3.1.3.1 Slope: 0 to 2% 5W
- 2.3.3.1.3.2 Slope: 2 to 5% 3W
- 2.3.3.1.3.3 Slope: 5 to 9% 3TW
- 2.3.3.1.3.4 Slope: 9 to 15% 4T
- 2.3.3.1.3.5 Slope: 15 to 30% 5T

3. Mode of deposition: Lacustrine

3.1 Subsoil particle size: fine loamy

3.1.1 Surface material particle size: fine loamy

3.1.1.1 Depth of surface material: >80 cm

3.1.1.1.2 Drainage: imperfect

- 3.1.1.1.2.1 Slope: 0 to 5% 4DW

3.1.1.1.3 Drainage: poor

- 3.1.1.1.3.1 Slope: 0 to 5% 5DW

(continued)

Table 12. Soil capability for agriculture key (continued)

3.1.2 Surface material particle size: coarse loamy

3.1.2.1 Depth of surface material: 50 to 80 cm

3.1.2.1.1 Drainage: moderately well

3.1.2.1.1.1 Slope: 0 to 5% 2C

3.1.2.1.2 Drainage: imperfect

3.1.2.1.2.1 Slope: 0 to 2% 3W

3.1.2.1.2.2 Slope: 2 to 5% 2C

3.1.2.1.3 Drainage: poor

3.1.2.1.3.1 Slope: 0 to 2% 5W

3.1.2.1.3.2 Slope: 2 to 5% 3W

3.1.3 Surface material particle size: sandy or sandy-fine

3.1.3.1 Depth of surface material: 50 to 80 cm

3.1.3.1.1 Drainage: moderately well

3.1.3.1.1.1 Slope: 0 to 5% 3M

3.1.3.1.2 Drainage: imperfect

3.1.3.1.2.1 Slope: 0 to 5% 3MW

3.1.3.1.3 Drainage: poor

3.1.3.1.3.1 Slope: 0 to 2% 5W

3.1.3.1.3.2 Slope: 2 to 5% 3W

4. Mode of deposition: Alluvium

4.1 Subsoil particle size: fine loamy or coarse loamy

4.1.1 Surface material particle size: any

4.1.1.1 Depth of surface material: any

4.2.1.1.1 Drainage: well

4.2.1.1.1.1 Slope: 0 to 5% 3I

4.2.1.1.2 Drainage: imperfect

4.2.1.1.2.1 Slope: 0 to 5% 4IW

4.2.1.1.3 Drainage: poor

4.2.1.1.3.1 Slope: 0 to 5% 5IW

(continued)

Table 12. Soil capability for agriculture key (continued)

5. Mode of deposition: Marine

5.1 Subsoil particle size: fine loamy or coarse loamy

5.1.1 Surface material particle size: any

5.1.1.1 Depth of surface material: >80 cm

5.1.1.1.1 Drainage: moderately well

5.1.1.1.1.1 Slope: 0 to 5% 2C

5.1.1.1.2 Drainage: imperfect

5.1.1.1.2.1 Slope: 0 to 5% 3DW

5.1.1.1.3 Drainage: poor

5.1.1.1.3.1 Slope: 0 to 5% 4DW

For surface stoniness, apply the following rules:

Original rating from key	Map unit stoniness class	Adjusted final CLI rating
2	S3	3P
3 one subclass	S3	3P + subclass *
3 two subclasses	S3	4X
2, 3, or 4	S4	5P
5 one subclass	S4	5P + subclass *
5 two subclasses	S4	7X
2, 3, 4, or 5	S5	7P
7 one subclass	S5	7P + subclass *
7 two subclasses	S5	NO CHANGE

* exclude if subclass='X'

Soil suitability for selected crops

Interpretive guidelines for assessing soil suitability for seven crops are given in Tables 13 to 19. The degree of suitability (good, fair, poor, or unsuitable) is determined by the most restrictive soil factor(s). For example, if the degree of suitability is "good" for all but one soil factor, and that factor has a degree of suitability of "poor," then the overall rating of the soil is "poor" with a single subclass to show the limitation. If two factors are rated "poor" then both limitations are shown in the subclass.

Limitations can have a cumulative effect for "fair" and "poor" ratings. If three or more properties are rated as such, then the overall rating for the soil is downgraded one class and the limitation is "x".

Suitability class ratings

Evaluation of soil suitability for growing agricultural crops is based on internal and external soil characteristics only. Four soil suitability classes are used to evaluate both mineral and organic soil map units.

Good (G). Soils in their present state have few or minor limitations that affect crop production. Limitations that are present can be easily overcome.

Fair (F). Soils in their present state have one or two moderate limitations that affect crop production. These can be overcome with special management or soil improvement measures.

Poor (P). Soils in their present state have one or two severe limitations which affect crop production. These can be overcome only with difficult and costly soil improvement or very careful management.

Unsuitable (U). Soils in their present state have one or more features that are so limiting that improvement efforts would be considered economically impractical.

Suitability subclass definitions

Depth of friable soil material (a). Depth of friable soil material refers to the available rooting depth. Rooting depth is controlled by subsoil layers which act as barriers to root penetration. Compact till, ortstein layers, and fragipan layers are examples.

Particle size of the friable soil material (b). Particle size distribution refers to grain size -- how much sand, silt, clay and coarse fragments are present. Particle size affects moisture retention characteristics, trafficability, surface crusting characteristics, and the rate at which water moves through soil. Table 6 lists the codes used in the interpretive tables.

Flooding (c). Flooding occurs when water overflows the natural or artificial confines of a stream or other body of water and accumulates on adjacent land areas. Flooding at any time of the year is hazardous to the survival and growth of perennial crops. Flooding during the growing season can be hazardous to the growth and survival of annual crops and can hinder planting and harvesting operations. Flooding can damage soils by eroding valuable topsoil and the eroded sediments can pollute adjacent water resources. The following flooding classes are used to define the relative degrees of flooding.

None (N). Soils are not susceptible to flooding.

Occasional (O). Soils are subjected to flooding of short duration once or twice a year.

Frequent (F). Soils are subjected to flooding of medium duration more than once a year.

Very frequent (VF). Soils are subjected to prolonged flooding every year.

Surface stoniness (d). Rock fragments in the topsoil interfere with the efficient operation of farm machinery for cultivation, seedbed preparation, and harvesting. The degree of limitation which stones impose is related to their number, size and spacing at the soil surface. Table 7 lists the codes used in the interpretive tables.

Rockiness class (e). Bedrock outcrops are incapable of supporting crops and interfere with the efficient operation of farm machinery. The degree of limitation is related to the percentage of surface area covered by exposed bedrock. Table 9 lists the codes used in the interpretive tables.

Slope (f). This is steepness of slope reported in percent. Slope affects the safe use of farm machinery and the surface drainage of water. Run-off from sloping cultivated fields can cause severe soil erosion problems. Run-off from nearly level land may be insufficient to prevent the ponding of surface water. Table 8 lists the codes used in the interpretive tables.

Soil Drainage (q). Soil drainage refers to the rapidity and extent of removal of water from a soil in relation to additions. It is affected by several factors acting separately or in combination, including texture, structure, slope gradient, length of slope, water holding capacity and evapotranspiration. Excess soil water adversely affects crop growth and the trafficability of farm machinery. Wet soils are slow to warm up in spring and have poor aeration. Rapidly drained soils are prone to drought. The following classes are defined in terms of available water storage capacity and source of water.

Rapidly drained (R). Water is removed rapidly in relation to supply. Excess water flows downward if underlying material is pervious. Subsurface flow may occur on steep gradients during heavy rainfall. Soils have low available water storage capacity within 1 m and are usually coarse textured, or shallow, or both. Water source is precipitation.

Well drained (W). Water is removed from the soil readily but not rapidly. Excess water flows downward readily into underlying pervious material or laterally as subsurface flow. Soils have intermediate available water storage capacity within 1 meter, and are generally intermediate in depth and texture. Water source is precipitation. On slopes, subsurface flow may occur for short durations but additions equal losses.

Moderately well drained (MW). Water is removed from the soil somewhat slowly in relation to supply because of low soil permeability, shallow water table, lack of gradient, or some combination of these. Soils have intermediate to high water storage capacity within 1 m and are usually medium to fine textured. Precipitation is the dominant water source in medium to fine textured soils. Precipitation and significant additions by subsurface flow are necessary in coarse textured soils.

Imperfectly drained (I). Water is removed from the soil sufficiently slowly in relation to supply to keep the soil wet for a significant part of the growing season. Excess water moves slowly downward if precipitation is the major source. If subsurface water or groundwater, or both, is the main source, the flow rate may vary but the soil remains wet for a significant part of the growing season. Precipitation is the main water source if the available water capacity is high. Contributions by subsurface flow or groundwater flow, or both, increases as available water storage capacity decreases. Soils have a wide range in available water supply, texture, and depth.

Poorly drained (P). Water is removed so slowly in relation to supply that the soil remains wet for a large part of the time the soil is not frozen. Excess water is evident in the soil for a large part of the growing season. Subsurface flow or groundwater flow or both, and precipitation are the main water sources. There may also be a perched water table. Soils have a wide range in available water storage capacity, texture and depth.

Very poorly drained (VP). Water is removed from the soil so slowly that the water table remains at or on the surface for the greater part of the time the soil is not frozen. Excess water is present in the soil for the greater part of the growing season. Groundwater flow and subsurface flow are the major water sources. Precipitation is less important except where there is a perched water table with precipitation exceeding evapotranspiration. Soils have a wide range in available water storage capacity, texture and depth.

Table 13. Soil suitability for alfalfa

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	---	20-50	<20
Particle size of friable soil (b)	2,3	0,1 4,7	5	6,8,9
Flooding (c)	N	---	0	F,VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	C,D	B,E	F	G
Drainage (g)	W	MW,R	I	P,VP

Modified from: Holmstrom 1986.

Table 14. Soil suitability for apples

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>80	50-80	20-50	<20
Particle size of friable soil (b)	2,3,4	5,7	0,1	9,6,8
Flooding (c)	N	---	---	0,F,VF
Stoniness (d)	0-2	3	---	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B,C,D	E	F	G
Drainage (g)	W	MW,R	I	P,VP

Modified from: Michalica 1983.
 Webster, D. Kentville Research Station, N.S.
 personal comm.

Table 15. Soil suitability for spring cereals

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	20-50	---	<20
Particle size of friable soil (b)	2,3,4	(0,1) ¹ 5	6,7	8,9
Flooding (c)	N	O	F	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B,C	D	E	F,G
Drainage (g)	W,MW	I,R	P	VP

Modified from: Holmstrom 1986.

¹Downgrade one class if drainage is imperfect

Table 16. Soil suitability for winter cereals

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	---	20-50	<20
Particle size of friable soil (b)	2,3,4	5	0,1 6,7	8,9
Flooding (c)	N	O	F	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	C	D,B	E	F,G
Drainage (g)	R,W,MW	I	P	VP

Modified from: Holmstrom 1986.

Table 17. Soil suitability for corn

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	20-50	---	<20
Particle size of friable soil (b)	2,3	(0,1) ¹ 4	5,6,7	8,9
Flooding (c)	N	O	F	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B	C	D	E,F,G
Drainage (g)	W,MW	I,R	P	VP

Modified from: Wang and Rees 1983.

¹Downgrade one class if drainage is imperfect

Table 18. Soil suitability for forage

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>20	---	---	<20
Particle size of friable soil (b)	2,3,4	0,1 7,5	6,8	9
Flooding (c)	N,O	F	---	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B,C,D	E	F	G
Drainage (g)	W,MW	I,R	P	VP

Modified from: MacMillan 1983.

Table 19. Soil suitability for vegetables¹

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	20-50	---	<20
Particle size of friable soil (b)	2,4,5	(0,1) ² 3	6,7	8,9
Flooding (c)	N	O	F	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B	C	D	E,F,G
Drainage (g)	R,W,MW	I	P	VP

Modified from: Wang and Rees 1983.

¹Irrigation is assumed

²Downgrade one class if drainage is imperfect

Ratings

The interpretations in Table 21 were output from dBase III+ computer programs which followed the key in Table 12. and the guidelines in Tables 13 to 19. Steps in the process were as follows:

1. A list of soil map unit names was produced from the maps.
2. For each map unit, the attribute values for the first soil, second soil and landscape features were entered. The soil attributes are shown in Table 20; landscape attributes are embedded in the map unit symbol (Fig. 10).
3. The appropriate program was run (e.g. forages, CLI, etc.) against the map units to produce crop ratings.
4. The results were formatted and printed.

Table 20. Soil attributes used for interpretations

Soil	Potential rooting depth (cm)	Drainage	Flooding	Mode of depo- sition	PSD of lower material
ACA	90	I	N	MARI	FNL
AVP52	60	MW	N	LACU	FNL
AVP54	60	MW	N	LACU	FNL
AVP82	90	MW	N	LACU	FNL
BGE	90	I	F	FLUV	COL
CAA21	40	P	N	TILL	ROCK
CAA23	40	P	N	TILL	ROCK
CAA27	40	P	N	TILL	ROCK
CAA51	60	P	N	TILL	ROCK
CAA52	60	P	N	TILL	ROCK
CAA53	60	P	N	TILL	ROCK
CAA57	60	P	N	TILL	ROCK
CBR	90	W	O	FLUV	COL
CGN	90	P	N	MARI	FNL
CHW	90	P	VF	FLUV	COL
CMU22	90	I	N	GLFL	SK-S
CMU23	90	I	N	GLFL	SK-S
CMU52	90	I	N	GLFL	SK-S
CMU53	90	I	N	GLFL	SK-S
CMU54	90	I	N	GLFL	SK-S
CMU55	90	I	N	GLFL	SK-S
CMU83	90	I	N	GLFL	SK-S
CMU86	90	I	N	GLFL	SK-S
CMU88	90	I	N	GLFL	SK-S
CNW54	90	R	N	GLFL	S-M
CNW85	90	R	N	GLFL	S-M
CNWX5	90	R	N	GLFL	S-M
CSY	90	VP	VF	ORGA	ORGA
CSY5P	60	VP	VF	ORGA	ORGA
CSY8P	90	VP	VF	ORGA	ORGA
CYF	90	I	F	FLUV	FNL
DFN	90	VP	VF	ORGA	ORGA
DFN5P	60	VP	VF	ORGA	ORGA
DFN8P	90	VP	VF	ORGA	ORGA
DRT22	40	I	N	TILL	COL
DRT52	60	I	N	TILL	COL
DRT82	90	I	N	TILL	COL
ECY22	40	P	N	TILL	COL-G
ECY23	40	P	N	TILL	COL-G
ECY52	60	P	N	TILL	COL-G
ECY53	60	P	N	TILL	COL-G
ECY55	60	P	N	TILL	COL-G
ECY83	90	P	N	TILL	COL-G
FAC23	90	I	N	TILL	SK-L

(continued)

Table 20. Soil attributes used for interpretations (continued)

Soil	Potential rooting depth (cm)	Drainage	Flooding	Mode of depo- sition	PSD of lower material
FAC53	90	I	N	TILL	SK-L
FAC87	90	I	N	TILL	SK-L
FSH52	60	I	N	LACU	FNL
FSH54	60	I	N	LACU	FNL
FSH55	60	I	N	LACU	FNL
FSH80	60	I	N	LACU	FNL
FUH20	40	MW	N	TILL	FNL
FUH22	40	MW	N	TILL	FNL
FUH50	60	MW	N	TILL	FNL
FUH52	60	MW	N	TILL	FNL
FUH53	60	MW	N	TILL	FNL
FUH80	90	MW	N	TILL	FNL
GNH52	90	P	N	GLFL	S-F
GNH84	90	P	N	GLFL	S-F
GNHX2	90	P	N	GLFL	S-F
GPR	90	MW	N	MARI	COL
HBT22	90	R	N	GLFL	SK-S
HBT23	90	R	N	GLFL	SK-S
HBT52	90	W	N	GLFL	SK-S
HBT53	90	W	N	GLFL	SK-S
HBT54	90	R	N	GLFL	SK-S
HBT55	90	R	N	GLFL	SK-S
HBT86	90	R	N	GLFL	SK-S
HBT88	90	R	N	GLFL	SK-S
HBTX3	90	R	N	GLFL	SK-S
HBTX8	90	R	N	GLFL	SK-S
HFD22	40	MW	N	TILL	COL-G
HFD23	40	MW	N	TILL	COL-G
HFD50	60	MW	N	TILL	COL-G
HFD52	60	W	N	TILL	COL-G
HFD53	60	W	N	TILL	COL-G
HFD83	90	W	N	TILL	COL-G
HTP20	40	I	N	TILL	FNL-G
HTP21	40	I	N	TILL	FNL-G
HTP22	40	I	N	TILL	FNL-G
HTP23	40	I	N	TILL	FNL-G
HTP50	60	I	N	TILL	FNL-G
HTP51	60	I	N	TILL	FNL-G
HTP52	60	I	N	TILL	FNL-G
HTP53	60	I	N	TILL	FNL-G
KGP54	90	I	N	GLFL	S-M
KGP85	90	I	N	GLFL	S-M
KGPX5	90	I	N	GLFL	S-M
KSV20	40	P	N	TILL	FNL

(cont. ued)

Table 20. Soil attributes used for interpretations (continued)

Soil	Potential rooting depth (cm)	Drainage	Flooding	Mode of depo- sition	PSD of lower material
KSV22	40	P	N	TILL	FNL
KSV52	60	P	N	TILL	FNL
LWR52	60	P	N	LACU	FNL
LWR54	60	P	N	LACU	FNL
LWR55	60	P	N	LACU	FNL
LWR80	60	P	N	LACU	FNL
MGA23	90	P	N	GLFL	SK-S
MGA52	90	P	N	GLFL	SK-S
MGA53	90	P	N	GLFL	SK-S
MGA83	90	P	N	GLFL	SK-S
MHO20	40	P	N	TILL	FNL-G
MHO21	40	P	N	TILL	FNL-G
MHO22	40	P	N	TILL	FNL-G
MHO23	40	P	N	TILL	FNL-G
MHO50	60	P	N	TILL	FNL-G
MHO51	60	P	N	TILL	FNL-G
MHO52	60	P	N	TILL	FNL-G
MHO53	60	P	N	TILL	FNL-G
MLL85	90	P	N	GLFL	S-M
MRW23	40	W	N	TILL	SK-L
MRW53	60	W	N	TILL	SK-L
MRW87	90	W	N	TILL	SK-L
MSW22	40	P	N	TILL	COL
MSW50	60	P	N	TILL	COL
MSW52	60	P	N	TILL	COL
MSW82	90	P	N	TILL	COL
NTV23	40	P	N	TILL	SK-L
NTV53	60	P	N	TILL	SK-L
NTV87	90	P	N	TILL	SK-L
OSW52	90	I	N	GLFL	S-F
OSW84	90	I	N	GLFL	S-F
OSWX2	90	I	N	GLFL	S-F
PGW22	40	MW	N	TILL	COL
PGW52	60	W	N	TILL	COL
PGW82	90	W	N	TILL	COL
QUE20	40	I	N	TILL	FNL
QUE22	40	I	N	TILL	FNL
QUE50	60	I	N	TILL	FNL
QUE52	60	I	N	TILL	FNL
QUE53	60	I	N	TILL	FNL
RG05P	60	VP	VF	ORGA	ORGA
RG08P	90	VP	VF	ORGA	ORGA
SGL22	40	I	N	TILL	COL-G
SGL23	40	I	N	TILL	COL-G

(continued)

Table 20. Soil attributes used for interpretations (continued)

Soil	Potential rooting depth (cm)	Drainage	Flooding	Mode of depo- sition	PSD of lower material
SGL52	60	I	N	TILL	COL-G
SGL53	60	I	N	TILL	COL-G
SGL83	90	I	N	TILL	COL-G
SHN21	40	W	N	TILL	ROCK
SHN23	40	W	N	TILL	ROCK
SHN27	40	W	N	TILL	ROCK
SHN50	60	W	N	TILL	ROCK
SHN51	60	W	N	TILL	ROCK
SHN53	60	W	N	TILL	ROCK
SHN57	60	W	N	TILL	ROCK
STW	90	P	VF	FLUV	FNL
TUO52	90	W	N	GLFL	S-F
TUO55	90	R	N	GLFL	S-F
TUO84	90	W	N	GLFL	S-F
TUOX2	90	W	N	GLFL	S-F
TUOX4	90	W	N	GLFL	S-F
VRN21	40	I	N	TILL	ROCK
VRN23	40	I	N	TILL	ROCK
VRN27	40	I	N	TILL	ROCK
VRN50	60	I	N	TILL	ROCK
VRN51	60	I	N	TILL	ROCK
VRN52	60	I	N	TILL	ROCK
VRN53	60	I	N	TILL	ROCK
VRN57	60	I	N	TILL	ROCK
WOB21	40	MW	N	TILL	FNL-G
WOB22	40	MW	N	TILL	FNL-G
WOB23	40	MW	N	TILL	FNL-G
WOB50	60	MW	N	TILL	FNL-G
WOB51	60	MW	N	TILL	FNL-G
WOB52	60	MW	N	TILL	FNL-G
WOB53	60	MW	N	TILL	FNL-G

Table 21. Soil map unit interpretations

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
ACA / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	30W
ACA =GPR / B	Ffg=Pg	Fg =Pg	G =Fg	Ff =Ffg	G =Fg	G =Fg	G =Fg	2C =30W
ACA >GPR / B	Pg >Ffg	Pg >Fg	Fg >G	Ffg>Ff	Fg >G	Fg >G	Fg >G	30W>2C
BGE / B	Uc	Uc	Pc	Pc	Pc	Fcg	Pc	41W
BGE =CBR / B	Pc =Uc	Uc	Fc =Pc	Fcf=Pc	Fc =Pc	G =Fcg	Fc =Pc	31 =41W
BGE =CHW / B	Uc =Ucg	Uc =Ucg	Pc =Uc	Pc =Uc	Pc =Uc	Fcg=Uc	Pc =Uc	41W=51W
BGE >CHW / B	Uc >Ucg	Uc >Ucg	Pc >Uc	Pc >Uc	Pc >Uc	Fcg>Uc	Pc >Uc	41W>51W
CAA23 /1C	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5RW
CAA52 /1C	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
CAA52=MSW52/ C	Pg =Ug	Pg =Ug	Fg =Pg	Fg =Pg	Ffg=Pg	Fg =Pg	Ffg=Pg	3W =5W
CBR / B	Pc	Uc	Fc	Fcf	Fc	G	Fc	31
CBR / C	Pc	Uc	Fc	Fc	Fcf	G	Fcf	31
CBR >BGE / B	Pc >Uc	Uc	Fc >Pc	Fcf>Pc	Fc >Pc	G >Fcg	Fc >Pc	31 >41W
CBR >CHW / B	Pc >Ucg	Uc >Ucg	Fc >Uc	Fcf>Uc	Fc >Uc	G >Uc	Fc >Uc	31 >51W
CHW / B	Ucg	Ucg	Uc	Uc	Uc	Uc	Uc	51W
CMU23 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fbg	3MW
CMU23 / C	Fg	Fg	G	G	Ff	G	Fbf	3M
CMU23>MGA53/ B	Pg >Ug	Pg >Ug	Fg >Pg	Ffg>Pg	Fg >Pg	Fg >Pg	Fbg>Pg	3MW>5W
CMU23>MGA53/ C	Fg >Pg	Fg >Pg	G >Fg	G >Fg	Ff >Ffg	G >Fg	Fbf>Px	3M >3W
CMU53 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fbg	3W
CMU53 / C	Fg	Fg	G	G	Ff	G	Fbf	2C
CMU53>HBT23/ C	Fg	Fg	G =Fg	G	Ff =Ffg	G =Fg	Fbf	2C =3M
CMU53>HBT53/ B	Ff =Pg	G =Pg	G =Fg	Ff =Ffg	G =Fg	G =Fg	Fb =Fbg	2C =3W
CMU53>HBT53/ C	G =Fg	G =Fg	G	G	Ff	G	Fbf	2C
CMU53>MGA53/ B	Pg >Ug	Pg >Ug	Fg >Pg	Ffg>Pg	Fg >Pg	Fg >Pg	Fbg>Pg	3W >5W
CNW85 / B	Pb	Fbg	Fbg	Fbf	Pb	Fbg	G	3M
CNW85 / C	Pb	Fbg	Fbg	Fb	Pb	Fbg	Ff	3M
CNW85 / D	Pb	Fbg	Px	Fbf	Pbf	Fbg	Pf	3MT
CNW85 / E	Pb	Px	Pf	Pf	Uf	Px	Uf	4T
CSY8P / B	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	0
CYF / B	Uc	Uc	Pc	Pc	Pc	Fcg	Pc	41W
CYF =STW / B	Uc =Ucg	Uc =Ucg	Pc =Uc	Pc =Uc	Pc =Uc	Fcg=Uc	Pc =Uc	41W=51W
CYF >STW / B	Uc >Ucg	Uc >Ucg	Pc >Uc	Pc >Uc	Pc >Uc	Fcg>Uc	Pc >Uc	41W>51W
DFN5P / B	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	0
DFN8P / B	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	0
DRT22 / B	Pag	Pag	Fag	Pa	Fag	Fg	Fag	4W
DRT22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	30
DRT22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	30T
DRT22 / E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
DRT22 /1C2	Pa	Pa	Px	Pa	Px	Fde	Px	30
DRT22=MSW22/ B	Pag=Ug	Pag=Ug	Fag=Pg	Pa =Pag	Fag=Pg	Fg =Pg	Fag=Pg	4W =5W
DRT22=MSW22/ C	Pa =Pag	Pa =Pag	Fa =Fag	Pa	Faf=Px	G =Fg	Faf=Px	30 =4W
DRT22=MSW52/ C	Pa =Pg	Pa =Pg	Fa =Fg	Fg =Pa	Faf=Ffg	G =Fg	Faf=Ffg	30 =3W
DRT22=PGW22/ B	Pa =Pag	Pa =Pag	Fa =Fag	Pa	Fa =Fag	G =Fg	Fa =Fag	30 =4W
DRT22=PGW22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	30
DRT22=PGW52/ B	Ff =Pag	Fa =Pag	G =Fag	Ff =Pa	G =Fag	G =Fg	G =Fag	2C =4W
DRT22=PGW52/ C	G =Pa	Fa =Pa	G =Fa	G =Pa	Faf=ff	G	Faf=ff	2C =30
DRT22=PGW52/ D	G =Pa	Fa =Pa	Faf=ff	Ff =Pa	Pf	G	Pf	30T=3T
DRT22=PGW52/ E	Ff =Pa	Faf=Pa	Pf	Paf=Pf	Uf	Ff	Uf	4T
DRT22=QUE22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	30
DRT22=QUE22/ E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
DRT22=SGL53/ D	Fg =Pa	Fag=Pa	Faf=ff	Ff =Pa	Pf	G	Pf	30T=3T
DRT22>MSW22/ B	Pag>Ug	Pag>Ug	Fag>Pg	Pa >Pag	Fag>Pg	Fg >Pg	Fag>Pg	4W >5W
DRT22>MSW22/ C	Pa >Pag	Pa >Pag	Fa >Fag	Pa	Faf>Px	G >Fg	Faf>Px	30 >4W
DRT22>PGW22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	30
DRT22>VRN23/ E	Pa >Pag	Pa >Pag	Pf	Paf	Uf	Ff >Ffg	Uf	4T >5R
DRT52 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
DRT52 / C	Fg	Fag	G	G	Ff	G	Ff	2C
DRT52 / D2	Fdg	Fag	Fdf	Fdf	Pf	Fd	Pf	3T

(continued)

Table 21. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
DRT52 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
DRT52 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
DRT52 / 1C2	Px	Px	Fde	Fde	Px	Fde	Px	2C
DRT52=MSW22/ C	Fg =Pag	Fag=Pag	G =Fag	G =Pa	Ff =Px	G =Fg	Ff =Px	2C =4W
DRT52=MSW52/ B	Pg =Ug	Pg =Ug	Fg =Pg	Ffg=Pg	Fg =Pg	Fg =Pg	Fg =Pg	3W =5W
DRT52=MSW52/ C	Fg =Pg	Fag=Pg	G =Fg	G =Fg	Ff =Ffg	G =Fg	Ff =Ffg	2C =3W
DRT52=MSW52/ C2	Fdg=Pg	Fag=Pg	Fd =Fdg	Fd =Fdg	Fdf=Px	Fd =Fdg	Fdf=Px	2C =3W
DRT52=MSW52/ E	Ffg=Pg	Pg =Px	Pf	Pf	Uf	Ff =Ffg	Uf	4T
DRT52 / C2	Fdg	Fag	Fd	Fd	Fdf	Fd	Fdf	2C
DRT52 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
DRT52=OSW52/ B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
DRT52=OSW52/ C	Fg	Fag=Fg	G	G	Ff	G	Ff	2C
DRT52=PGW52/ B	Ff =Pg	Fa =Pg	G =Fg	Ff =Ffg	G =Fg	G =Fg	G =Fg	2C =3W
DRT52=PGW52/ C	G =Fg	Fa =Fag	G	G	Ff	G	Ff	2C
DRT52=PGW52/ D	G =Fg	Fa =Fag	Ff	Ff	Pf	G	Pf	3T
DRT52=PGW52/ E	Ff =Ffg	Faf=Px	Pf	Pf	Uf	Ff	Uf	4T
DRT52=PGW52/102	Fde=Px	Fae=Px	Px	Px	Pf	Fde	Pf	3T
DRT52=PGW82/ B	Ff =Pg	G =Pg	G =Fg	Ff =Ffg	G =Fg	G =Fg	G =Fg	2C =3W
DRT52=PGW82/ C	G =Fg	G =Fag	G	G	Ff	G	Ff	2C
DRT52=PGW82/ D	G =Fg	G =Fag	Ff	Ff	Pf	G	Pf	3T
DRT52=QUE22/ B	Pag=Pg	Fag=Pg	Fag=Fg	Ffg=Pa	Fag=Fg	Fg	Fag=Fg	3W =4W
DRT52=QUE22/ C	Fg =Pa	Fag=Pa	G =Fa	G =Pa	Faf=ff	G	Faf=ff	2C =30
DRT52=QUE22/ D	Fg =Pa	Fag=Pa	Faf=ff	Ff =Pa	Pf	G	Pf	30T=3T
DRT52=QUE22/ E	Ffg=Pa	Pa =Px	Pf	Paf=Pf	Uf	Ff	Uf	4T
DRT52=QUE52/ C	Fg	Fag	G	G	Ff	G	Ff	2C
DRT52=QUE52/ D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
DRT52=SGL53/ C	Fg	Fag	G	G	Ff	G	Fbf=Ff	2C
DRT52=SGL53/ D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
DRT52=SGL83/ B	Pg	Pg	Fg	Ffg	Fg	Fg	Fbg=Fg	3W
DRT52>MSW22/ C	Fg >Pag	Fag>Pag	G >Fag	G >Pa	Ff >Px	G >Fg	Ff >Px	2C >4W
DRT52>MSW52/ B	Pg >Ug	Pg >Ug	Fg >Pg	Ffg>Pg	Fg >Pg	Fg >Pg	Fg >Pg	3W >5W
DRT52>MSW52/ C	Fg >Pg	Fag>Pg	G >Fg	G >Fg	Ff >Ffg	G >Fg	Ff >Ffg	2C >3W
DRT52>MSW52/ C2	Fdg>Pg	Fag>Pg	Fd >Fdg	Fd >Fdg	Fdf>Px	Fd >Fdg	Fdf>Px	2C >3W
DRT52>MSW52/ D	Fg >Pg	Fag>Pg	Ff >Ffg	Ff >Ffg	Pf	G >Fg	Pf	3T >3TW
DRT52>PGW52/ C	Fg >G	Fag>Fa	G	G	Ff	G	Ff	2C
DRT52>PGW52/ C2	Fdg>Fd	Fag>Fa	Fd	Fd	Fdf	Fd	Fdf	2C
DRT52>PGW52/ D	Fg >G	Fag>Fa	Ff	Ff	Pf	G	Pf	3T
DRT52>PGW52/ D2	Fdg>Fd	Fag>Fa	Fdf	Fdf	Pf	Fd	Pf	3T
DRT52>PGW82/ B	Pg >Ff	Pg >G	Fg >G	Ffg>Ff	Fg >G	Fg >G	Fg >G	3W >2C
DRT52>PGW82/ C	Fg >G	Fag>G	G	G	Ff	G	Ff	2C
DRT52>PGW82/ D	Fg >G	Fag>G	Ff	Ff	Pf	G	Pf	3T
DRT52>QUE22/ C	Fg >Pa	Fag>Pa	G >Fa	G >Pa	Ff >Faf	G	Ff >Faf	2C >30
DRT52>QUE22/ D	Fg >Pa	Fag>Pa	Ff >Faf	Ff >Pa	Pf	G	Pf	3T >30T
DRT52>QUE52/ B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
DRT52>QUE52/ C	Fg	Fag	G	G	Ff	G	Ff	2C
DRT52>QUE52/ D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
DRT52>QUE52/ E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
DRT52>SGL53/ C	Fg	Fag	G	G	Ff	G	Ff >Fbf	2C
DRT82 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
DRT82 / C	Fg	Fg	G	G	Ff	G	Ff	2C
DRT82 / D	Fg	Fg	Ff	Ff	Pf	G	Pf	3T
DRT82=PGW82/ C	G =Fg	G =Fg	G	G	Ff	G	Ff	2C
DRT82=PGW82/ D	G =Fg	G =Fg	Ff	Ff	Pf	G	Pf	3T
DRT82=PGW82/ D2	Fd =Fdg	G =Fg	Fdf	Fdf	Pf	Fd	Pf	3T
DRT82>MSW52/ B	Pg >Ug	Pg >Ug	Fg >Pg	Ffg>Pg	Fg >Pg	Fg >Pg	Fg >Pg	3W >5W
DRT82>MSW52/ C	Fg >Pg	Fg >Pg	G >Fg	G >Fg	Ff >Ffg	G >Fg	Ff >Ffg	2C >3W
DRT82>MSW82/ B	Pg >Ug	Pg >Ug	Fg >Pg	Ffg>Pg	Fg >Pg	Fg >Pg	Fg >Pg	3W >5W
DRT82>PGW82/ B	Pg >Ff	Pg >G	Fg >G	Ffg>Ff	Fg >G	Fg >G	Fg >G	3W >2C

(continued)

Table 21. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
ECY23 / B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
ECY23 / C	Pag	Pag	Fag	Pa	Px	Fg	Px	4W
ECY23 / D	Pag	Pag	Px	Pa	Pf	Fg	Pf	4W
ECY23=MSW22/ B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
ECY23=MSW22/ C	Pag	Pag	Fag	Pa	Px	Fg	Px	4W
ECY23=MSW52/ C	Pag=Pg	Pag=Pg	Fag=Fg	Fg =Pa	Ffg=Px	Fg	Ffg=Px	3W =4W
ECY23=SGL23/ C	Pa =Pag	Pa =Pag	Fa =Fag	Pa	Faf=Px	G =Fg	Px	3D =4W
ECY23=SGL53/ C	Fg =Pag	Fag=Pag	G =Fag	G =Pa	Ff =Px	G =Fg	Fbf=Px	2C =4W
ECY23=SGL53/ D	Fg =Pag	Fag=Pag	Ff =Px	Ff =Pa	Pf	G =Fg	Pf	3T =4W
ECY23>SGL23/ C	Pag>Pa	Fag>Pa	Fag>Fa	Pa	Px >Faf	Fg >G	Px	4W >3D
ECY23>SGL53/ C	Pag>Fg	Pag>Fag	Fag>G	Pa >G	Px >Ff	Fg >G	Px >Fbf	4W >2C
ECY53 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
ECY53 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Px	3W
ECY53 / C2	Pg	Pg	Fdg	Fdg	Px	Fdg	Px	3W
ECY53=HTP53/ C	Fg =Pg	Fag=Pg	G =Fg	G =Fg	Ff =Ffg	G =Fg	Fbf=Px	2C =3W
ECY53=SGL53/ B	Pg =Ug	Pg =Ug	Fg =Pg	Ffg=Pg	Fg =Pg	Fg =Pg	Fbg=Pg	3W =5W
ECY53=SGL53/ C	Fg =Pg	Fag=Pg	G =Fg	G =Fg	Ff =Ffg	G =Fg	Fbf=Px	2C =3W
ECY83 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
ECY83=SGL83/ C	Fg =Pg	Fg =Pg	G =Fg	G =Fg	Ff =Ffg	G =Fg	Fbf=Px	2C =3W
FSH80 / B	Pg	Pbg	Pb	Pb	Pb	Fbg	Pb	4D
FUM52 / C	G	Fa	G	G	Ff	G	Ff	2C
FUM52 / E	Ff	Faf	Pf	Pf	Uf	Ff	Uf	4T
FUM52>QUE52/ C	G >Fg	Fa >Fag	G	G	Ff	G	Ff	2C
GNH52 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
GNH52 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Ffg	3W
GPR / B	Ffg	Fg	G	Ff	G	G	G	2C
HBT23 / B	Ffg	Fg	Fg	Ff	Fg	Fg	Fb	3M
HBT23 / C	Fg	Fg	Fg	G	Ffg	Fg	Fbf	3M
HBT23 / D	Fg	Fg	Ffg	Ff	Pf	Fg	Pf	3MT
HBT23 / E	Ffg	Ffg	Pf	Pf	Uf	Ffg	Uf	4T
HBT23=HBT53/ B	Ff =Ffg	G =Fg	G =Fg	Ff	G =Fg	G =Fg	Fb	2C =3M
HBT23=HBT53/ C	G =Fg	G =Fg	G =Fg	G	Ff =Ffg	G =Fg	Fbf	2C =3M
HBT53 / B	Ff	G	G	Ff	G	G	Fb	2C
HBT53 / C	G	G	G	G	Ff	G	Fbf	2C
HBT53 / D	G	G	Ff	Ff	Pf	G	Pf	3T
HBT53>CMU53/ B	Ff >Pg	G >Pg	G >Fg	Ff >Ffg	G >Fg	G >Fg	Fb >Fbg	2C >3W
HBT53>CMU53/ C	G >Fg	G >Fg	G	Ff	G	G	Fbf	2C
HFD22=SGL22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
HFD23 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
HFD23=SGL23/ C	Pa	Pa	Fa	Pa	Faf	G	Px	3D
HFD23=SGL23/ E2	Pa	Pa	Pf	Paf	Uf	Fdf	Uf	4T
HFD23=SHN53/ C	G =Pa	Fa =Pa	G =Fa	G =Pa	Faf=Ff	G	Fbf=Px	3D =3R
HFD23=SHN53/ D	G =Pa	Fa =Pa	Faf=Ff	Ff =Pa	Pf	G	Pf	3DT=3RT
HFD23=SHN53/ F	Paf=Pf	Paf=Pf	Uf	Uf	Uf	Pf	Uf	5T
HFD23>SGL23/ D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
HFD23>SGL53/ D	Pa >Fg	Pa >Fag	Faf>Ff	Pa >Ff	Pf	G	Pf	3DT>3T
HFD23>SGL53/ E	Pa >Ffg	Pa >Px	Pf	Paf>Pf	Uf	Ff	Uf	4T
HFD23>SHN53/ D	Pa >G	Pa >Fa	Faf>Ff	Pa >Ff	Pf	G	Pf	3DT>3RT
HFD52 / D	G	Fa	Ff	Ff	Pf	G	Pf	3T
HFD52 / E	Ff	Faf	Pf	Pf	Uf	Ff	Uf	4T
HFD52 / E2	Fdf	Faf	Pf	Pf	Uf	Fdf	Uf	4T
HFD52 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
HFD52=SGL52/ D	G =Fg	Fa =Fag	Ff	Ff	Pf	G	Pf	3T
HFD52=SGL52/ E	Ff =Ffg	Faf=Px	Pf	Pf	Uf	Ff	Uf	4T
HFD52>SGL52/ E	Ff >Ffg	Faf>Px	Pf	Pf	Uf	Ff	Uf	4T
HFD52>SHN23/ C	G >Pa	Fa >Pa	G >Fa	G >Pa	Ff >Faf	G	Ff >Px	2C >5R
HFD53 / C	G	Fa	G	G	Ff	G	Fbf	2C
HFD53 / C2	Fd	Fa	Fd	Fd	Fdf	Fd	Px	2C
HFD53 / D	G	Fa	Ff	Ff	Pf	G	Pf	3T

(continued)

Table 21. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
HFD53 / E	Ff	Faf	Pf	Pf	Uf	Ff	Uf	4T
HFD53 / E2	Fdf	Faf	Pf	Pf	Uf	Fdf	Uf	4T
HFD53 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
HFD53=PGW52/ C	G	Fa	G	G	Ff	G	Fbf=Ff	2C
HFD53=PGW52/ D	G	Fa	Ff	Ff	Pf	G	Pf	3T
HFD53=SGL23/ D	G =Pa	Fa =Pa	Faf=Ff	Ff =Pa	Pf	G	Pf	30T=3T
HFD53=SGL53/ C	G =Fg	Fa =Fag	G	G	Ff	G	Fbf	2C
HFD53=SGL53/ D	G =Fg	Fa =Fag	Ff	Ff	Pf	G	Pf	3T
HFD53=SGL53/ F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
HFD53>SGL53/ C	G >Fg	Fa >Fag	G	G	Ff	G	Fbf	2C
HFD53>SGL53/ D	G >Fg	Fa >Fag	Ff	Ff	Pf	G	Pf	3T
HFD53>SGL53/ E	Ff >Ffg	Faf>Px	Pf	Pf	Uf	Ff	Uf	4T
HFD83 / C	G	G	G	G	Ff	G	Fbf	2C
HFD83 / D	G	G	Ff	Ff	Pf	G	Pf	3T
HFD83 / E	Ff	Ff	Pf	Pf	Uf	Ff	Uf	4T
HFD83 / E2	Fdf	Ff	Pf	Pf	Uf	Fdf	Uf	4T
HFD83=SGL83/ B	Ff =Pg	G =Pg	G =Fg	Ff =Ffg	G =Fg	G =Fg	Fb =Fbg	2C =3W
HFD83=SGL83/ C	G =Fg	G =Fg	G	G	Ff	G	Fbf	2C
HFD83=SGL83/ D	G =Fg	G =Fg	Ff	Ff	Pf	G	Pf	3T
HFD83=SGL83/ E	Ff =Ffg	Ff =Ffg	Pf	Pf	Uf	Ff	Uf	4T
HTP22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
HTP22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	30T
HTP22 / D2	Pa	Pa	Px	Pa	Pf	Fd	Pf	30T
HTP22 / E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
HTP22=VRN52/ E	Pa =Pg	Pa =Pg	Pf	Paf=Pf	Uf	Ff =Ffg	Uf	4T
HTP22=MHO22/ C	Pa >Pag	Pa >Pag	Fa >Fag	Pa	Faf>Px	G >Fg	Faf>Px	3D >4W
HTP22=SHN53/ E	Pa >Ff	Pa >Faf	Pf	Paf>Pf	Uf	Ff	Uf	4T
HTP23 / C	Pa	Pa	Fa	Pa	Faf	G	Px	3D
HTP23 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	30T
HTP23 / E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
HTP23 / E2	Pa	Pa	Pf	Paf	Uf	Fdf	Uf	4T
HTP23=MHO23/ C	Pa =Pag	Pa =Pag	Fa =Fag	Pa	Faf=Px	G =Fg	Px	3D =4W
HTP23=QUE22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf=Px	3D
HTP23=VRN53/ C	Pa =Pg	Pa =Pg	Fa =Fg	Fg =Pa	Faf=Ffg	G =Fg	Px	3D =3RW
HTP23=WOB53/ B	Ffg=Pag	Fag=Pag	G =Fag	Ff =Pa	G =Fag	G =Fg	Fb =Px	2C =4W
HTP23=WOB53/ D	G =Pa	Fa =Pa	Faf=Ff	Ff =Pa	Pf	G	Pf	30T=3T
HTP23=WOB53/ E	Ff =Pa	Faf=Pa	Pf	Paf=Pf	Uf	Ff	Uf	4T
HTP23=WOB53/ E2	Fdf=Pa	Faf=Pa	Pf	Paf=Pf	Uf	Fdf	Uf	4T
HTP23>MHO23/ C	Pa >Pag	Pa >Pag	Fa >Fag	Pa	Faf>Px	G >Fg	Px	3D >4W
HTP23>MHO23/ D	Pa >Pag	Pa >Pag	Faf>Px	Pa	Pf	G >Fg	Pf	30T>4W
HTP23>MHO23/ E	Pa >Pag	Pa >Pag	Pf	Paf	Uf	Ff >Ffg	Uf	4T >4TW
HTP23>VRN53/ C	Pa >Pg	Pa >Pg	Fa >Fg	Pa >Fg	Faf>Ffg	G >Fg	Px	3D >3RW
HTP23>WOB53/ D	Pa >G	Pa >Fa	Faf>Ff	Pa >Ff	Pf	G	Pf	30T>3T
HTP52 / C	Fg	Fag	G	G	Ff	G	Ff	2C
HTP52 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
HTP52 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
HTP52 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
HTP52=QUE22/ D	Fg =Pa	Fag=Pa	Faf=Ff	Ff =Pa	Pf	G	Pf	30T=3T
HTP52=SGL52/ D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
HTP52>QUE52/ C	Fg	Fag	G	G	Ff	G	Ff	2C
HTP53 / C	Fg	Fag	G	G	Ff	G	Fbf	2C
HTP53 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
HTP53 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
HTP53>MHO23/ C	Fg =Pag	Fag=Pag	G =Fag	G =Pa	Ff =Px	G =Fg	Fbf=Px	2C =4W
HTP53>MHO53/ C	Fg =Pg	Fag=Pg	G =Fg	G =Fg	Ff =Ffg	G =Fg	Fbf=Px	2C =3W
HTP53>MHO53/ D	Fg =Pg	Fag=Pg	Ff =Ffg	Ff =Ffg	Pf	G =Fg	Pf	3T =3TW
HTP53>DRT82/ C	Fg	Fag>Fg	G	G	Ff	G	Fbf>Ff	2C
HTP53>DRT82/ D	Fg	Fag>Fg	Ff	Ff	Pf	G	Pf	3T
HTP53>MHO53/ C	Fg >Pg	Fag>Pg	G >Fg	G >Fg	Ff >Ffg	G >Fg	Fbf>Px	2C >3W

(continued)

Table 21. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
HTP53>MH053/ D	Fg >Pg	Fag>Pg	Ff >Ffg	Ff >Ffg	Pf	G >Fg	Pf	3T >3TW
HTP53>QUE52/ C	Fg	Fag	G	G	Ff	G	Fbf>Ff	2C
KSV20 / B	Ug	Ug	Pg	Ux	Pg	Pg	Pg	50W
KSV20 / C	Pag	Ux	Pb	Pab	Pb	Fbg	Pb	50W
KSV22 / B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
KSV22 / C	Pag	Pag	Fag	Pa	Px	Fg	Px	4W
KSV22 / D	Pag	Pag	Px	Pa	Pf	Fg	Pf	4W
KSV22=QUE22/ B	Pag=Ug	Pag=Ug	Fag=Pg	Pa =Pag	Fag=Pg	Fg =Pg	Fag=Pg	4W =5W
KSV22=QUE22/ C	Pa =Pag	Pa =Pag	Fa =Fag	Pa	Faf=Px	G =Fg	Faf=Px	3D =4W
KSV22=QUE22/ D	Pa =Pag	Pa =Pag	Faf=Px	Pa	Pf	G =Fg	Pf	3DT=4W
KSV22>DFN5P/ B	Ug >Ucg	Ug >Ucg	Pg >Ucg	Pag>Ucg	Pg >Ucg	Pg >Ucg	Pg >Ucg	5W >D
KSV52 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
KSV52 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Ffg	3W
KSV52 / D	Pg	Pg	Ffg	Ffg	Pf	Fg	Pf	3TW
LWR80 / B	Ug	Ug	Pg	Pbg	Pg	Pg	Pg	50W
LWR80=MSW22/ B	Ug	Ug	Pg	Pag=Pbg	Pg	Pg	Pg	50W=5W
MGA53 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
MGA53 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Px	3W
MHO22 / B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
MHO22 / C	Pag	Pag	Fag	Pa	Px	Fg	Px	4W
MHO23 / B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
MHO23 / C	Pag	Pag	Fag	Pa	Px	Fg	Px	4W
MHO23>HFD23/ D	Pag>Pa	Pag>Pa	Px >Faf	Pa	Pf	Fg >G	Pf	4W >3DT
MHO23>HTP23/ B	Ug >Pag	Ug >Pag	Pg >Fag	Pag>Pa	Pg >Fag	Pg >Fg	Pg >Px	5W >4W
MHO23>HTP53/ C	Pag>Fg	Pag>Fag	Fag>G	Pa >G	Px >Ff	Fg >G	Px >Fbf	4W >2C
MHO52 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
MHO52 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Ffg	3W
MHO53 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
MHO53 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Px	3W
MSW22 / B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
MSW22 / C	Pag	Pag	Fag	Pa	Px	Fg	Px	4W
MSW52 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
MSW52 / B2	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
MSW52 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Ffg	3W
MSW52 / D	Pg	Pg	Ffg	Ffg	Pf	Fg	Pf	3TW
MSW52=QUE22/ B	Pag=Ug	Pag=Ug	Fag=Pg	Pa =Pg	Fag=Pg	Fg =Pg	Fag=Pg	4W =5W
MSW52=QUE22/ C	Pa =Pg	Pa =Pg	Fa =Fg	Fg =Pa	Faf=Ffg	G =Fg	Faf=Ffg	3D =3W
MSW52>DFN5P/ B	Ug >Ucg	Ug >Ucg	Pg >Ucg	Pg >Ucg	Pg >Ucg	Pg >Ucg	Pg >Ucg	5W >D
MSW52>DRT52/ B	Ug >Pg	Ug >Pg	Pg >Fg	Pg >Ffg	Pg >Fg	Pg >Fg	Pg >Fg	5W >3W
MSW52>DRT52/ C	Pg >Fg	Pg >Fag	Fg >G	Fg >G	Ffg>Ff	Fg >G	Ffg>Ff	3W >2C
MSW82 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
MSW82 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Ffg	3W
MSW82=OSW52/ B	Pg =Ug	Pg =Ug	Fg =Pg	Ffg=Pg	Fg =Pg	Fg =Pg	Fg =Pg	3W =5W
OSW52 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
OSW52 / C	Fg	Fg	G	G	Ff	G	Ff	2C
OSW52 / E	Ffg	Ffg	Pf	Pf	Uf	Ff	Uf	4T
OSW52=UO52/ B	Ff =Pg	G =Pg	G =Fg	Ff =Ffg	G =Fg	G =Fg	G =Fg	2C =3W
OSW52=UO52/ C	G =Fg	G =Fg	G	G	Ff	G	Ff	2C
OSW52=UO52/ D	G =Fg	G =Fg	Ff	Ff	Pf	G	Pf	3T
PGW22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
PGW22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
PGW22 / E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
PGW22 / 1C2	Pa	Pa	Px	Pa	Px	Fde	Px	3D
PGW52 / B	Ff	Fa	G	Ff	G	G	G	2C
PGW52 / C	G	Fa	G	G	Ff	G	Ff	2C
PGW52 / C2	Fd	Fa	Fd	Fd	Fdf	Fd	Fdf	2C
PGW52 / D	G	Fa	Ff	Ff	Pf	G	Pf	3T
PGW52 / E	Ff	Faf	Pf	Pf	Uf	Ff	Uf	4T
PGW52 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T

(continued)

Table 21. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
PGW52=QUE22/ C	G =Pa	Fa =Pa	G =Fa	G =Pa	Faf=Ff	G	Faf=Ff	2C =3D
PGW52=TUO52/ C	G	G =Fa	G	G	Ff	G	Ff	2C
PGW52=TUO52/ D	G	G =Fa	Ff	Ff	Pf	G	Pf	3T
PGW52>DRT22/ E	Ff >Pa	Faf>Pa	Pf	Pf >Paf	Uf	Ff	Uf	4T
PGW52>DRT52/ C	G >Fg	Fa >Fag	G	G	Ff	G	Ff	2C
PGW52>DRT52/ D	G >Fg	Fa >Fag	Ff	Ff	Pf	G	Pf	3T
PGW52>HFD53/ D	G	Fa	Ff	Ff	Pf	G	Pf	3T
PGW82 / B	Ff	G	G	Ff	G	G	G	2C
PGW82 / C	G	G	G	G	Ff	G	Ff	2C
PGW82 / D	G	G	Ff	Ff	Pf	G	Pf	3T
PGW82 / E	Ff	Ff	Pf	Pf	Uf	Ff	Uf	4T
PGW82=TUO52/ B	Ff	G	G	Ff	G	G	G	2C
PGW82=TUO52/ C	G	G	G	G	Ff	G	Ff	2C
PGW82=TUO52/ D	G	G	Ff	Ff	Pf	G	Pf	3T
PGW82=TUO52/ E	Ff	Ff	Pf	Pf	Uf	Ff	Uf	4T
PGW82>DRT22/ C	G >Pa	G >Pa	G >Fa	G >Pa	Ff >Faf	G	Ff >Faf	2C >3D
PGW82>DRT52/ C	G >Fg	G >Fag	G	G	Ff	G	Ff	2C
PGW82>DRT52/ D	G >Fg	G >Fag	Ff	Ff	Pf	G	Pf	3T
PGW82>DRT82/ B	Ff >Pg	G >Pg	G >Fg	Ff >Ffg	G >Fg	G >Fg	G >Fg	2C >3W
PGW82>DRT82/ C	G >Fg	G >Fg	G	G	Ff	G	Ff	2C
PGW82>DRT82/ D	G >Fg	G >Fg	Ff	Ff	Pf	G	Pf	3T
PGW82>TUO52/ C	G	G	G	G	Ff	G	Ff	2C
PGW82>TUO52/ D	G	G	Ff	Ff	Pf	G	Pf	3T
QUE20 / B	Pag	Ux	Pb	Pab	Pb	Fbg	Pb	4DW
QUE20 / C	Pa	Pab	Fab	Pab	Px	Fb	Px	4DW
QUE20 / D	Pa	Pab	Px	Pab	Pf	Fb	Pf	4DW
QUE20 / E	Pa	Pab	Pf	Ux	Uf	Fbf	Uf	5X
QUE22 / B	Pag	Pag	Fag	Pa	Fag	Fg	Fag	4W
QUE22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
QUE22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
QUE22 / E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
QUE22 / F	Paf	Paf	Uf	Uf	Uf	Pf	Uf	5T
QUE22=QUE52/ C	Fg =Pa	Fag=Pa	G =Fa	G =Pa	Faf=Ff	G	Faf=Ff	2C =3D
QUE22=QUE52/ D	Fg =Pa	Fag=Pa	Faf=Ff	Ff =Pa	Pf	G	Pf	3DT=3T
QUE22>DRT22/ E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
QUE22>DRT52/ C	Pa >Fg	Pa >Fag	Fa >G	Pa >G	Faf>Ff	G	Faf>Ff	3D >2C
QUE22>DRT52/ D	Pa >Fg	Pa >Fag	Faf>Ff	Pa >Ff	Pf	G	Pf	3DT>3T
QUE22>DRT52/ E	Pa >Ffg	Pa >Px	Pf	Paf>Pf	Uf	Ff	Uf	4T
QUE22>FUH52/ C	Pa >G	Pa >Fa	Fa >G	Pa >G	Faf>Ff	G	Faf>Ff	3D >2C
QUE22>KSV22/ C	Pa >Pag	Pa >Pag	Fa >Fag	Pa	Faf>Px	G >Fg	Faf>Px	3D >4W
QUE22>KSV22/ D	Pa >Pag	Pa >Pag	Faf>Px	Pa	Pf	G >Fg	Pf	3DT>4W
QUE22>KSV22/ E	Pa >Pag	Pa >Pag	Pf	Paf	Uf	Ff >Ffg	Uf	4T >4TW
QUE22>KSV22/1C2	Pa >Pag	Pa >Pag	Px	Pa	Px	Fde>Px	Px	3D >4W
QUE52 / C	Fg	Fag	G	G	Ff	G	Ff	2C
QUE52 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
QUE52 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
QUE52 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
QUE52>DRT52/ C	Fg	Fag	G	G	Ff	G	Ff	2C
QUE52>VRN53/1C	Feg>Pg	Px >Pg	Fe >Feg	Fe >Feg	Fef>Px	Fe >Feg	Fef>Px	2C >3RW
RG08P / B	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	0
SGL23 / C	Pa	Pa	Fa	Pa	Faf	G	Px	3D
SGL23 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
SGL23 / E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
SGL23 / F	Paf	Paf	Uf	Uf	Uf	Pf	Uf	5T
SGL23=VRN53/ D	Pa =Pg	Pa =Pg	Faf=ffg	Ff=Pa	Pf	G =Fg	Pf	3DT=4X
SGL23>ECY23/ C	Pa >Pag	Pa >Pag	Fa >Fag	Pa	Faf>Px	G >Fg	Px	3D >4W
SGL23>ECY23/ C2	Pa >Pag	Pa >Pag	Faf>Px	Pa	Px	Fd >Fdg	Px	3D >4W
SGL23>ECY23/ D	Pa >Pag	Pa >Pag	Faf>Px	Pa	Pf	G >Fg	Pf	3DT>4W
SGL23>HFD23/ C	Pa	Pa	Fa	Pa	Faf	G	Px	3D

(continued)

Table 21. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
SGL23>HFD53/ C	Pa >G	Pa >Fa	Fa >G	Pa >G	Faf>Ff	G	Px >Fbf	30 >2C
SGL23>HFD53/ E	Pa >Ff	Pa >Faf	Pf	Paf>Pf	Uf	Ff	Uf	4T
SGL23>VRN23/1C	Pa >Pag	Pa >Pag	Fae>Px	Pa	Px	Fe >Feg	Px	30 >5R
SGL52 / C	Fg	Fag	G	G	Ff	G	Ff	2C
SGL52 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
SGL52 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
SGL52 / E2	Px	Px	Pf	Pf	Uf	Fdf	Uf	4T
SGL52>ECY52/ D	Fg >Pg	Fag>Pg	Ff >Ffg	Ff >Ffg	Pf	G >Fg	Pf	3T >3TW
SGL52>ECY52/ D2	Fdg>Pg	Fag>Pg	Fdf>Px	Fdf>Px	Pf	Fd >Fdg	Pf	3T >3TW
SGL52>HFD52/ D	Fg >G	Fag>Fa	Ff	Ff	Pf	G	Pf	3T
SGL53 / B	Pg	Pg	Ff	Ffg	Fg	Fg	Fbg	3W
SGL53 / C	Fg	Fag	G	G	Ff	G	Fbf	2C
SGL53 / C2	Fdg	Fag	Fd	Fd	Fdf	Fd	Px	2C
SGL53 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
SGL53 / D2	Fdg	Fag	Fdf	Fdf	Pf	Fd	Pf	3T
SGL53 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
SGL53 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
SGL53>ECY23/ C2	Fdg>Pag	Fag>Pag	Fd >Px	Fd >Pa	Fdf>Px	Fd >Fdg	Px	2C >4W
SGL53>HFD53/ C	Fg >G	Fag>Fa	G	G	Ff	G	Fbf	2C
SGL53>HFD53/ D	Fg >G	Fag>Fa	Ff	Ff	Pf	G	Pf	3T
SGL53>HFD53/ E	Ffg>Ff	Px >Faf	Pf	Pf	Uf	Ff	Uf	4T
SGL53>HFD83/ E	Ffg>Ff	Px >Ff	Pf	Pf	Uf	Ff	Uf	4T
SGL53>HTP23/ C	Fg >Pa	Fag>Pa	G >Fa	G >Pa	Ff >Faf	G	Fbf>Px	2C >3D
SGL53>HTP23/ D	Fg >Pa	Fag>Pa	Ff >Faf	Ff >Pa	Pf	G	Pf	3T >3DT
SGL53>VRN23/1C	Feg>Pag	Px >Pag	Fe >Px	Fe >Pa	Fef>Px	Fe >Feg	Px	2C >5R
SGL53>VRN53/ C	Fg >Pg	Fag>Pg	G >Fg	G >Fg	Ff >Ffg	G >Fg	Fbf>Px	2C >3RW
SGL53>VRN53/ D	Fg >Pg	Fag>Pg	Ff >Ffg	Ff >Ffg	Pf	G >Fg	Pf	3T >4X
SGL53>VRN53/ E	Ffg>Pg	Px >Pg	Pf	Pf	Uf	Ff >Ffg	Uf	4T
SGL83 / C	Fg	Fg	G	G	Ff	G	Fbf	2C
SGL83 / D	Fg	Fg	Ff	Ff	Pf	G	Pf	3T
SGL83 / E	Ffg	Ffg	Pf	Pf	Uf	Ff	Uf	4T
SHN23 /1D	Pa	Pa	Px	Pa	Pf	Fe	Pf	5R
SHN23>VRN53/1D	Pa =Pg	Pa =Pg	Px	Pa =Px	Pf	Fe =Feg	Pf	4X =5R
SHN53 / D	G	Fa	Ff	Ff	Pf	G	Pf	3RT
SHN53 /1C	Fe	Fae	Fe	Fe	Fef	Fe	Px	3R
SHN53 /1E	Fef	Px	Pf	Pf	Uf	Fef	Uf	4T
SHN53>HFD23/ E	Ff >Pa	Faf>Pa	Pf	Pf >Paf	Uf	Ff	Uf	4T
STW / B	Ucg	Ucg	Uc	Uc	Uc	Uc	Uc	51W
TU052 / B	Ff	G	G	Ff	G	G	G	2C
TU052 / C	G	G	G	G	Ff	G	Ff	2C
TU052 / D	G	G	Ff	Ff	Pf	G	Pf	3T
TU052 / E	Ff	Ff	Pf	Pf	Uf	Ff	Uf	4T
TU052 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
TU052>TU0X2/ B	Ff	G	G	Ff	G	G	G	2C
TU052>TU0X2/ C	G	G	G	G	Ff	G	Ff	2C
TU052>TU0X2/ D	G	G	Ff	Ff	Pf	G	Pf	3T
TU052>DRT82/ B	Ff >Pg	G >Pg	G >Fg	Ff >Ffg	G >Fg	G >Fg	G >Fg	2C >3W
TU052>DRT82/ C	G >Fg	G >Fg	G	G	Ff	G	Ff	2C
TU052>DRT82/ D	G >Fg	G >Fg	Ff	Ff	Pf	G	Pf	3T
TU052>HFD83/ B	Ff	G	G	Ff	G	G	G >Fb	2C
TU052>HFD83/ C	G	G	G	G	Ff	G	Ff >Fbf	2C
TU052>HFD83/ D	G	G	Ff	Ff	Pf	G	Pf	3T
TU052>OSW52/ B	Ff >Pg	G >Pg	G >Fg	Ff >Ffg	G >Fg	G >Fg	G >Fg	2C >3W
TU052>OSW52/ C	G >Fg	G >Fg	G	G	Ff	G	Ff	2C
TU052>PGW82/ B	Ff	G	G	Ff	G	G	G	2C
TU052>PGW82/ C	G	G	G	G	Ff	G	Ff	2C
TU052>PGW82/ D	G	G	Ff	Ff	Pf	G	Pf	3T
TU0X2 / B	Ff	G	G	Ff	G	G	G	2C
TU0X2 / C	G	G	G	G	Ff	G	Ff	2C

(continued)

Table 21. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
TUOX2 / D	G	G	Ff	Ff	Pf	G	Pf	3T
TUOX2>TUO52/ C	G	G	G	G	Ff	G	Ff	2C
TUOX2>TUO52/ D	G	G	Ff	Ff	Pf	G	Pf	3T
VRN23 /1C	Pag	Pag	Px	Pa	Px	Feg	Px	5R
VRN23 /1D	Pag	Pag	Px	Pa	Pf	Feg	Pf	5R
VRN23 /1D2	Pag	Pag	Px	Pa	Pf	Px	Pf	5R
VRN23 /1E	Pag	Pag	Pf	Pa	Uf	Px	Uf	5R
VRN23 /1F	Ux	Ux	Uf	Uf	Uf	Pf	Uf	5RT
VRN23 /2D	Ue	Ue	Ue	Ue	Ue	Ue	Ue	5R
VRN23>DRT52/1C	Pag>Feg	Pag>Px	Px >Fe	Pa >Fe	Px >Fef	Feg>Fe	Px >Fef	5R >2C
VRN52 /1C	Pg	Pg	Feg	Feg	Px	Feg	Px	3RW
VRN52 /1D	Pg	Pg	Px	Px	Pf	Feg	Pf	4X
VRN53 /1C	Pg	Pg	Feg	Feg	Px	Feg	Px	3RW
VRN53 /1D	Pg	Pg	Px	Px	Pf	Feg	Pf	4X
VRN53>SHN53/1C	Pg >Fe	Pg >Fae	Feg>Fe	Feg>Fe	Px >Fef	Feg>Fe	Px	3RW>3R
WOB22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
WOB52>HTP52/ D	G >Fg	Fa >Fag	Ff	Ff	Pf	G	Pf	3T
WOB53 / E	Ff	Faf	Pf	Pf	Uf	Ff	Uf	4T
ZCB	*	*	*	*	*	*	*	*
ZES	*	*	*	*	*	*	*	*
ZGP	*	*	*	*	*	*	*	*
ZGY	*	*	*	*	*	*	*	*
ZNS	*	*	*	*	*	*	*	*
ZRC	*	*	*	*	*	*	*	*
ZSM	*	*	*	*	*	*	*	*
ZUL	*	*	*	*	*	*	*	*
ZZZ	*	*	*	*	*	*	*	*

* interpretation not applicable

REFERENCES

- Atmospheric Environment Service. 1980. Canadian climate normals 1951-1980. Temperature and precipitation, Atlantic Provinces. Environment Canada.
- Atmospheric Environment Service. 1982. Canadian climate normals 1951-1980. Degree days, Vol. 4, Frost, Vol. 6. Environment Canada.
- Cann, D.B.; Hilchey, J.D.; Smith, G.R. 1954. Soil survey of Hants County, Nova Scotia. Report No. 5. Nova Scotia Soil Survey.
- Day, J.H. (ed.). 1982. The Canada soil information system (CanSIS). Manual for describing soils in the field. Expert Committee on Soil Survey. Land Resource Research Institute, Contrib. No. 82-52, Research Branch, Agriculture Canada, Ottawa, Ont.
- Department of the Environment. 1972. The Canada Land Inventory. Soil capability classification for agriculture. Rep. No. 2-1965 (reprinted) 16 pp.
- Dzikowski, P. 1984. Nova Scotia agroclimatic atlas. Soils and Crops Branch, Nova Scotia Dept. of Agriculture and Marketing, Truro, Nova Scotia.
- Holmstrom, D.A. 1986. Soils of the Sussex area of New Brunswick. New Brunswick Soil Survey. Report No. 10, Research Branch, Agriculture Canada. 151 pp.
- Keppie, J.D. 1979. Geological map of the province of Nova Scotia. Department of Mines and Energy, N.S. 1 map.
- Loucks, O.L. 1962. A forest classification for the Maritime Provinces. Proc. Nova Scotia Inst. Sci. Vol. 25, Part 2.
- MacMillan, J.K. 1983. Soil limitations for growing timothy. New Brunswick. Department of Agriculture. Unpublished mimeo.
- Michalica, K. 1983. Soil suitability for apple orchards. N.B. Dept. Agr. Unpublished mimeo.
- McKeague, J.A., editor. 1978. Manual on soil sampling and methods of analysis. Canada Soil Survey Committee, Canadian Society of Soil Science. Ottawa, Ont. 212 pp.
- Nowland, J.L.; and MacDougall, J.I. 1973. Soils of Cumberland County, Nova Scotia Rep. No. 17, Nova Scotia Soil Survey. 133 pp.

- Roland, A.E. 1982. Geological Background and Physiography of Nova Scotia. Nova Scotia Institute of Science. Ford Publishing Co., Halifax, N.S. 311 pp.
- Wang, C. 1982. Application of transect method to soil survey problems. Land Resource Research Institute. Contrib. No. 82-02, Research Branch, Agriculture Canada, Ottawa, Ont.
- Wang, C.; Rees, H.W. 1983. Soils of the Rogersville-Richibucto region of New Brunswick. New Brunswick Soil Survey Report No. 9. Research Branch, Agriculture Canada and New Brunswick Department of Agriculture and Rural Development. 239 pp.
- Wicklund, R.E.; Smith, G.R. 1948. Soil survey of Colchester County, Nova Scotia. Nova Scotia Soil Survey, Rep. No. 3. 57 pp.
- Webb, K.T.; Thompson, R.L.; Beke, G.J.; Nowland, J.L. (in prep.). Soils of Colchester County, Nova Scotia. Report 19. Nova Scotia Soil Survey. Land Resource Research Centre, Research Branch, Agriculture Canada.

APPENDIX - GLOSSARY OF TERMS AND ABBREVIATIONS USED IN PART 3

Bulk density (g/cm^3) The mass of dry soil per unit bulk volume measured in grams per cubic centimetre.

CEC Cation exchange capacity is the total amount of exchangeable cations that a soil can absorb. Exchangeable cations are positive ions held or absorbed on negatively charged sites on mineral or organic particles which in total are referred to as the exchange complex of the soil. In this report CEC is the sum of the exchangeable cations recorded in milliequivalents per 100 grams of soil ($\text{meq}/100 \text{ g}$). One milliequivalent is the amount of an element or compound that will combine with or replace one milligram of hydrogen.

Coarse fragment (% volume) Mineral soil particles greater than 2 mm measured as a percent of the total volume of a soil sample.

Consistence The resistance of the soil material to deformation or rupture (i.e., its strength). Terms used to describe consistence depend on the moisture of the soil.

Horizon A soil layer approximately parallel to the land surface which differs from other layers in properties such as color, particle size, structure, and consistence and in chemical, biological, and physical properties.

Hydraulic conductivity (cm/h) The ability of the soil to transmit water vertically when saturated, expressed as a velocity in centimetres per hour.

Organic matter (%) The organic fraction of the soil as a percentage; including plant and animal residues at various stages of decomposition and substances synthesized by the soil population.

Particle size (%) Percentages of the various soil separates in a soil sample. The abbreviations, names and sizes of the separates are as follows:

Sand	2-0.05 mm
Silt	0.05-0.002 mm
Clay	less than 0.002 mm

pH The negative logarithm of the hydrogen ion activity of the soil. The degree of acidity or alkalinity of the soil measured in water (H_2O) or a solution of calcium chloride (CaCl_2).

**MAPS
NOT
FILMED**

**CARTES
OMISES**